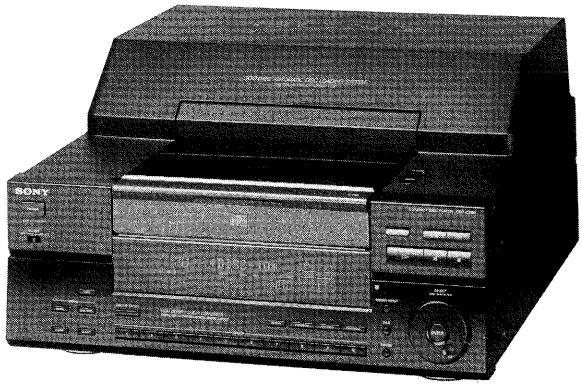
CDP-CX151

SERVICE MANUAL

US Model
Canadian Model
AEP Model
UK Model
Australian Model



Model Name Using Similar Mechanism	CDP-CX100
CD Mechanism Type	CDM-30
Base Unit Type	KSM-310ABM
Optical Pick-up Type	KSS-310A

SPECIFICATIONS

Compact disc player

Laser	Semiconductor laser
Wavelength	780 – 790 nm
Frequency response	2 Hz to 20 kHz ± 0.3 dB
Signal-to-noise ratio	More than 107 dB
Dynamic range	More than 98 dB
Harmonic distortion	Less than 0.0027%
Channel separation	More than 100 dB

Outputs

	Jack type	Maximum output level	Load impedance
LINE OUT	Phono jacks	2 V (at 50 kilohms)	Over 10 kilohms
DIGITAL OUT (OPTICAL)	Optical output connector	–18 dBm	Wave length: 660 nm

General

Power requirements

Where purchased	Power requirements
USA, Canada	120 V AC, 60 Hz
Australia, UK	240 V AC, 50 Hz
AEP	220 - 230V AC, 50/60 Hz

Power consumption	15 W
Dimensions (approx.) (w/h/d)	When the front cover is closed 430 × 240 × 470 mm (17 × 9 1/2 × 18 5/8 in.) incl. projecting parts When the front cover is open 430 × 380 × 470 mm (17 × 15 × 18 5/8 in.) incl. projecting parts
Mass (approx.)	9.0 kg (19 lbs 14 oz)

Supplied accessories

Audio cord (2 phono plugs – 2 phono plugs) (1)
Remote commander (remote) (1)
Sony SUM-3 (NS) batteries (2)
CD booklet holder (1)
Labels (2)

Design and specifications are subject to change without notice.

COMPACT DISC PLAYER

SONY

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Notes on chip component replacement

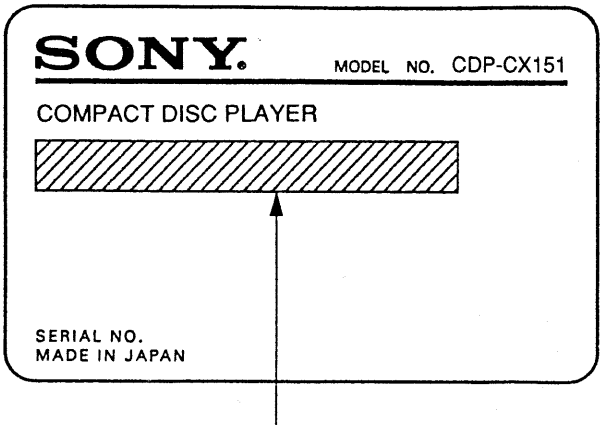
- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

Flexible Circuit Board Repairing

- Keep the temperature of the soldering iron around 270 °C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

MODEL IDENTIFICATION

— Specification Label —



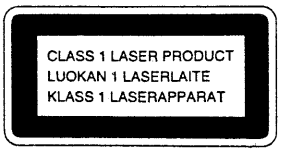
US, Canadian model	: AC : 120V 60Hz 15W
AEP model	: AC : 220 – 230V ∿ 50/60Hz 15W
UK model	: AC : 220 – 230V ∿ 50/60Hz
Australian model	: AC : 240V ∿ 50/60Hz

CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

The following caution label is located inside of the unit.

CAUTION	:	INVISIBLE LASER RADIATION WHEN OPEN, AVOID EXPOSURE TO BEAM.
ADVARSEL:		USYNLIG LASERSTRÅLING VED ÅBNING NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION. UNDGÅ UDS ÆTTELSE FOR STRÅLING.
VARO!	:	AVATTAESSA JA SUOJALUKITUS OHITETTAESSA DLET ALTTIINA LASERSÄTEILYLLE.
VARNING	:	LASERSTRÅLING NÄR DENNA DEL ÄR OPPNÅD OCH SPÄRREN ÄR URXOPPLAD.
ADVERSEL:		USYNLIG LASERSTRÅLING NÅR DEKSEL ÅPNES UNNGÅ EKSPONERING FOR STRÅLEN.



This appliance is classified as a CLASS 1 LASER product.
The CLASS 1 LASER PRODUCT MARKING is located on the rear exterior.

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:
Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microampers). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.

2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.

3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

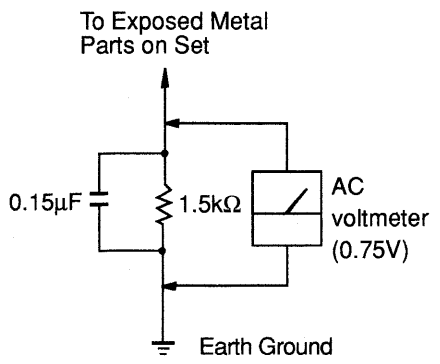


Fig. A. Using an AC voltmeter to check AC leakage.

SAFETY-RELATED COMPONENT WARNING !!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

SECTION 1
SERVICING NOTE

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic break-down because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic break-down and also use the procedure in the printed matter which is included in the repain parts.
The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.

LASER DIODE AND FOCUS SEARCH OPERATION CHECK

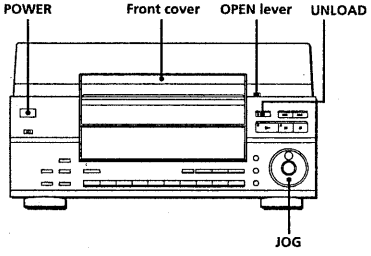
Carry out the "S curve check" in "CD section adjustment" and check that the S curve waveform is output three times.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

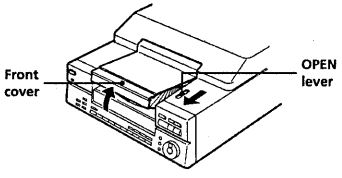
Inserting CDs

You can insert up to 100 discs into this player.

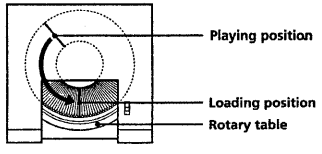


1 Press POWER to turn on the player.

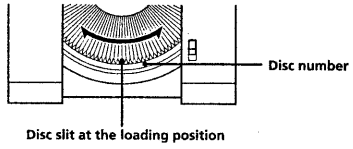
2 Slide the OPEN lever toward you and lift up the front cover.



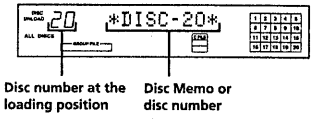
3 Press UNLOAD.
The UNLOAD button indicator and "UNLOAD" in the display flash. After the rotary table turns, both indicator and indication light up.



4 Find the disc slit where you want to insert a disc while checking the disc number (written beside the slit and also indicated in the display). If you want to move the slit toward you, turn the JOG dial.

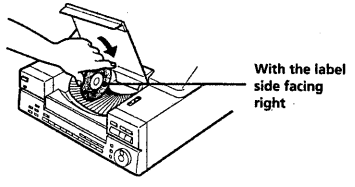


The disc number at the loading position and the Disc Memo (see page 15) appear in the display. As you turn the JOG dial, the disc number and the Disc Memo change.

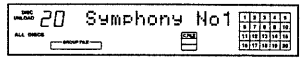


When the disc does not have the Disc Memo, the disc number (e.g., *DISC-20*) appears instead of the Disc Memo. This disc number disappears if you do not play the disc for more than a minute. However, the disc number appears again when you play the disc.

5 Insert a disc with the label side facing right.

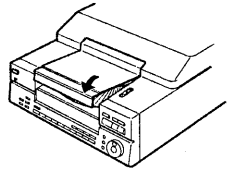


After inserting the disc, you can label the disc to locate it easily (see "Labeling Discs (Disc Memo)" on page 15).



6 Repeat Steps 4 and 5 to insert more discs.

7 Close the front cover by pressing the right edge of the cover until it clicks.

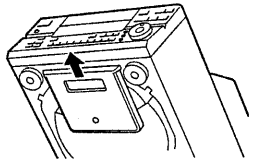


Always close the front cover except when you insert or remove discs.

When the UNLOAD indicator lights up
"UNLOAD" appears in the display and the current disc slit comes to the loading position. You can turn the rotary table, but cannot play CDs at this time.

The supplied CD booklet holder helps you locate a disc
You can store up to 100 CD booklets. Insert booklets and stick the number label on the film of a pocket and the booklet so that you can locate the disc easily.

When you drop something inside the player
Slide the bottom cover to detach it. Remove the foreign object, then slide the cover back in.



Note
When you insert an 8 cm (3-inch) CD, be sure to attach a Sony CSA-8 adaptor (not supplied) to the disc.

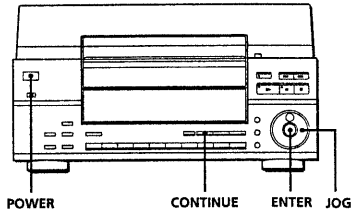
Removing CDs

After following Steps 1 to 4 of "Inserting CDs" on page 6, remove the discs. Then close the front cover.

When you replace a disc in a slit
Custom Files (see page 15) remain even if you remove a disc. If you replace the disc with a new one, "DISC CHANGED" appears in the display. Erase or change the Custom File information if necessary.

Playing CDs

You can play all the tracks on a disc in the original order (Continuous Play). You can also play up to 100 discs consecutively.
Before you begin, make sure you have connected the player to an amplifier correctly and firmly as indicated on pages 4 and 5, and have inserted the discs correctly as indicated on page 6.



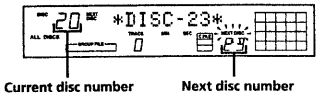
1 Turn on the amplifier and select the CD player position.

2 Press POWER to turn on the player.

3 Press CONTINUE to select ALL DISCS or 1 DISC. Each time you press CONTINUE, "ALL DISCS" and "1 DISC" appear in the display alternately.

When you select	The player plays
ALL DISCS	All discs in the player consecutively in the order of disc number. Empty disc slits are skipped.
1 DISC	Only one disc you have selected

4 Turn the JOG dial while checking the disc numbers or Disc Memo (see page 15) in the display to select the first disc (ALL DISCS) or the disc you want (1 DISC).
The next disc number changes as you turn the JOG dial.



5 Press ENTER.
The selected disc is set to the playing position, and the player plays all the discs from the selected one (ALL DISCS) or all the tracks once (1 DISC).
Adjust the volume on the amplifier.

This section is extracted from instruction manual.

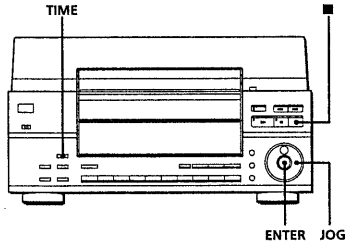
To stop playback
Press ■.

When you want to	Press
Pause	❚❚
Resume play after pause	▷ or ❚❚
Go to the next disc	DISC SKIP + once. Hold down the button to skip discs.
Go back to the preceding disc	DISC SKIP – once. Hold down the button to skip discs.
Go to the next track	▷▷I
Go back to the preceding track	I◁◁
Stop play and release the disc from the playing position	UNLOAD

When you turn off the player
The player remembers the last playing disc and the play mode (Continuous, Shuffle (see page 11) or Program (see page 12)). When you turn on the player again, therefore, the player plays the same disc in the same play mode.

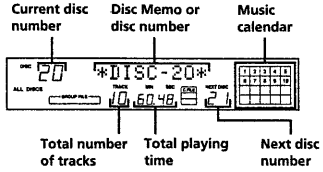
Using the Display

You can check information about the disc using the display.



Checking the total number and playing time of the tracks

Select the disc you want to check, and press ENTER in the Continuous Play mode. As the player starts play automatically, press ■ to stop, and then TIME.
The display shows the current disc number, total number of tracks, total playing time and music calendar.



When you want to check another disc
Press DISC SKIP on the remote in the stop mode to select the disc you want to check. The total number of tracks and the total playing time of the selected disc appear for a while.

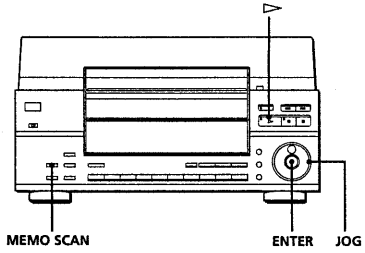
Checking the remaining time

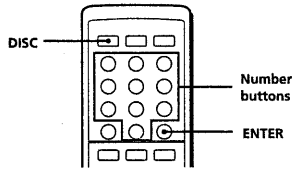
Each time you press TIME while playing a disc, the display changes as shown in the table below. The track numbers in the music calendar disappear after they are played.

Press TIME	To check
Once	Remaining time on the current track
Twice	Remaining time on the current disc*
Three times	Playing time and number of the current track

* This information is available only in the Continuous Play mode. If you have deleted tracks (see page 16), "– – . – –" appears instead of the remaining time.

Locating a Specific Disc





Selecting a disc with the player

Turn the JOG dial until the disc number you want appears in the display. Press ENTER to start play.

Selecting a disc directly with the remote

1 Press DISC on the remote.

2 Press the number button of the disc.

To select a disc with a number over 10
Press the 10's digit first, then the 1's digit. To enter 0, use the button 10/0.
Example: To enter number 30
Press 3, then 0 (10/0)
To enter number 100, press 0 (10/0) twice.

3 Press ENTER to start play.

Locating a disc by scanning each Disc Memo (Memo Scan)

You can locate a disc you want to play quickly by scanning the Disc Memos (see page 15) in the display and start playing.
Note that you cannot use this function in the ALL DISCS Shuffle and Program Play modes.

1 Press MEMO SCAN until "MEMO SCAN" appears in the display.
The Disc Memos scroll in the display.

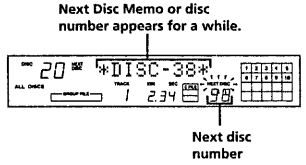
2 Press ▷ or ENTER when the Disc Memo of the disc you want to play appears.
The disc is set to the playing position, and the player starts playing.

You can jump to the next or preceding Disc Memo while scanning
Press I◁◁ or ▷▷I.

Specifying the Next Disc to Play

You can specify the next disc to play while playing a disc in the continuous play mode.

While playing a disc, turn the JOG dial until the disc number you want appears in the display.



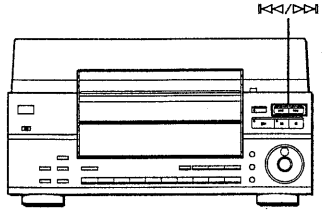
After the current disc is played, the next disc you have specified starts playing.
If you want to skip to the next disc right away, press ENTER while playing the current disc.

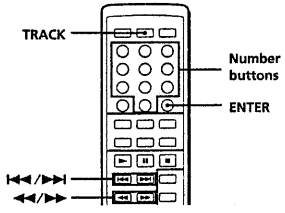
To cancel the disc you have specified
Press CONTINUE twice.

Playing CDs

Locating a Specific Track or a Point in a Track

You can quickly locate any track while playing a disc using the ⏮/⏭ (AMS: Automatic Music Sensor) buttons or number buttons on the remote. You can also locate a specific point in a track while playing a disc.





To locate	Press
the next or succeeding tracks	⏭ repeatedly until you find the track
the current or preceding tracks	⏮ repeatedly until you find the track
a specific track directly	1 Press TRACK. 2 Press the number button of the track. 3 Press ENTER.
a point in a track while monitoring the sound	▶▶ (forward) or ◀◀ (backward) and hold down until you find the point
a point in a track quickly by observing the display during pause	◀◀/▶▶ and hold down until you find the point. You will not hear the sound during the operation.

When you directly locate a track with a number over 10

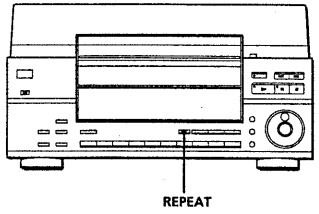
Press the 10's digit first, then the 1's digit. To enter 0, use the button 10/0.

Note

If "↻↻" appears in the display, the disc has reached the end while you were pressing ▶▶. Press ◀◀ or ⏮ to go back.

Playing Repeatedly

You can play discs/tracks repeatedly in any play mode. The player stops after repeating the tracks five times in each play mode.



Press REPEAT while playing a disc.
"REPEAT" appears in the display. The player repeats the discs/tracks as follows:

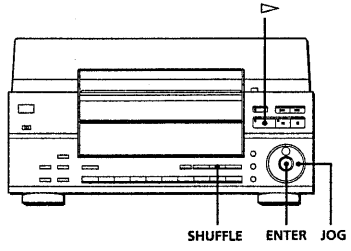
When the disc is played in	The player repeats
Continuous Play (ALL DISCS) (page 7)	All tracks on all discs
Continuous Play (1 DISC) (page 7)	All tracks on the current disc
Shuffle Play (ALL DISCS) (page 11)	All tracks on all discs in random orders
Shuffle Play (1 DISC) (page 11)	All tracks on the current disc in random orders
Program Play (page 12)	The same program

To cancel Repeat Play

Press REPEAT again. "REPEAT OFF" appears for a while, and "REPEAT" disappears from the display.

Playing in a Random Order (Shuffle Play)

You can have the player "shuffle" the tracks and play in a random order. The player shuffles all the tracks on all discs or on the disc you specified.



Shuffle Play on all discs

You can play all tracks on all discs in a random order.

1 Press SHUFFLE repeatedly until "ALL DISCS" appears in the display.

2 Press ▷.
ALL DISCS Shuffle Play starts.
"🔀" appears in the display while the player is "shuffling" the discs or tracks.

To cancel Shuffle Play

Press CONTINUE.

You can start Shuffle Play while playing

Press SHUFFLE, and Shuffle Play starts from the current track.

Notes

- You cannot specify the next disc to play during ALL DISCS Shuffle Play.
- Even if you press ■ or turn off the player during ALL DISCS Shuffle Play, the player remembers which discs/tracks are played and which are not. Therefore, if you want to start ALL DISCS Shuffle Play again from the beginning, be sure to repeat the procedure from Step 1.

Shuffle Play on one disc

You can play all tracks on the specific disc in a random order.

1 Press SHUFFLE repeatedly until "1 DISC" appears in the display.

2 Turn the JOG dial to select the disc.

3 Press ENTER.
1 DISC Shuffle Play starts on the selected disc.
"🔀" appears in the display while the player is "shuffling" the tracks.

To cancel Shuffle Play

Press CONTINUE.

You can directly select a disc

See "Selecting a disc directly with the remote" on page 9.

You can go to the next disc during 1 DISC Shuffle Play

Press DISC SKIP +.

You can specify the next disc to play during 1 DISC Shuffle Play

Turn the JOG dial to specify the next disc. After all the tracks on the current disc are played in a random order, the next disc starts playing. If you want to skip to the next disc right away, press ENTER while playing the current disc.

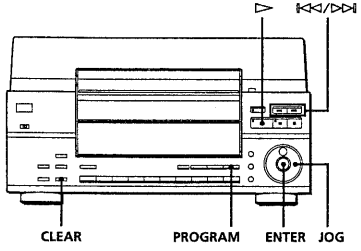
You can start Shuffle Play while playing

Press SHUFFLE, and Shuffle Play starts from the current track.

Creating Your Own Programs (Program Play)

You can arrange the order of the tracks and/or discs and create 3 different programs and programs are stored automatically. A program can contain up to 32 "steps" — one "step" may contain a track or a whole disc.
You can make programs using the controls on the remote as well as ones on the player. However, the programming procedures are different.

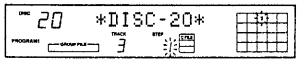
Creating a program using the player



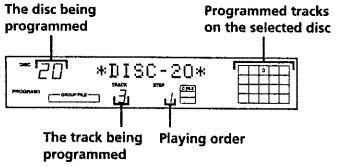
1 Press PROGRAM until the program number you want (PROGRAM 1, 2 or 3) appears in the display. If a program is already stored in the selected program number, the last step of the program appears in the display. When you want to erase the whole program, hold down CLEAR until "ALL CLEAR" appears in the display (see page 14).

2 Turn the JOG dial to select the disc.

3 To program a whole disc, skip this step. Press I◁◁/▷▷I to select a track.



4 Press ENTER or PROGRAM.



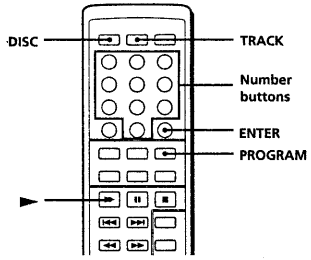
5 To program other discs/tracks, do the following:

To program	Repeat Steps
Other discs	2 and 4
Other tracks on the same disc	3 to 4
Other tracks on other discs	2 to 4

6 Press ⊳ to start Program Play.

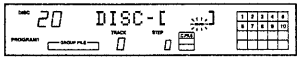
To cancel Program Play
Press CONTINUE.

Creating a program using the remote



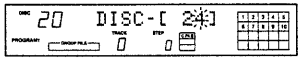
1 Press PROGRAM until the program number you want (PROGRAM 1, 2 or 3) appears in the display. If a program is already stored in the selected program number, the last step of the program appears in the display. When you want to erase the whole program, hold down CLEAR until "ALL CLEAR" appears in the display (see page 14).

2 Press DISC.

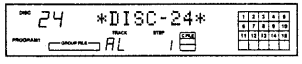


3 Press the number button of the disc.

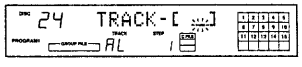
To select a disc with a number over 10
Press the 10's digit first, then the 1's digit. To enter 0, use the button 10/0 (see page 9).



4 Press ENTER.

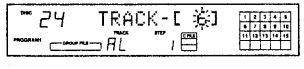


5 To program a whole disc, skip this step and go to Step 8. Press TRACK.

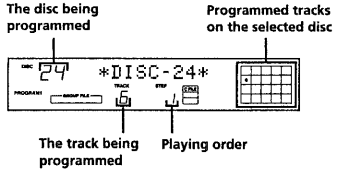


6 Press the number button of the track.

To select a track with a number over 10
Press the 10's digit first, then the 1's digit. To enter 0, use the button 10/0 (see page 9).



7 Press ENTER.



8 To program other discs/tracks, do the following:

To program	Repeat Steps
Other discs	2 to 4
Other tracks on the same disc	5 to 7
Other tracks on other discs	2 to 7

9 Press ► to start Program Play.

To cancel Program Play
Press CONTINUE.

The programs remain even after Program Play ends
When you press ►, you can play the same program again.
The programs are stored in the player's memory for about a month with the power turned off.

When you press PROGRAM during Continuous or Shuffle Play
The program you played last time appears and will be played after the current track.

The programs remain until you erase them
If you replace discs, the programmed disc and track numbers remain. So, the player plays only the existing disc and track numbers. However, the disc and track numbers that are not found in the player or on the disc are deleted from the program, and the rest of the program is played in the programmed order.

Note
If "PROGRAM FULL" appears in the display, it means that you have already programmed 32 steps and cannot program any more track or disc.

Checking the programmed order

You can check your program before or after you start playing.

Press CHECK.
Each time you press this button, the display shows the track or disc number in the programmed order. After the last track or disc in the program, the display shows "END" and returns to the original display.

Changing the programmed order

You can change your program before you start playing.

To	You need to
Erase a track or disc	Press CHECK until the track or disc you do not want appears in the display, then press CLEAR.
Erase the last track or disc in the program	Press CLEAR. Each time you press the button, the last track or disc will be cleared.
Add tracks or discs to the end of the program	Follow the programming procedure
Change the whole program completely	Hold down CLEAR until "ALL CLEAR" appears in the display to erase the whole program, then create a new program following the programming procedure.

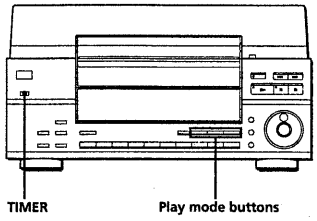
Erasing the programs stored in memory

1 Press PROGRAM repeatedly in the stop mode until the program number (PROGRAM 1, 2 or 3) you want to erase appears in the display.

2 Hold down CLEAR until "ALL CLEAR" appears in the display.

Playing Using a Timer

You can start playing a disc at any time you want by connecting a timer (not supplied). Please also refer to the instructions for the timer if you need help.



1 Press one of the play mode buttons to select the play mode you want.

2 Set TIMER on the player to PLAY.

3 Set the timer to the time you want.
The player turns off. When the set time comes, the player turns on and starts playing.

4 After you have used the timer, set TIMER on the player to OFF.

What You Can Do With the Custom Files

The player can store 3 types of information called "Custom Files" for each disc. Once you have stored Custom Files for a disc, the player automatically recalls what you have stored whenever you select the disc. Note that Custom Files will be erased if you do not use the player for about 1 month.

You can store this information:

When you use	You can
Disc Memo (page 15)	Label the disc using up to 12 characters
Delete Bank (page 16)	Delete unwanted tracks and store only the tracks you want
Group File (page 17)	Group discs up to 10 groups to locate them easily

The Custom File indication lights up when you store information and when you select discs with information.

Where are Custom Files stored?

Custom Files are stored not on the disc, but in the player's memory. It means you cannot use Custom Files when you play the disc on other players. Also, since the player stores Custom Files with each disc slit, so you cannot use Custom File when you insert a disc in another slit.

When you replace a disc in a slit

Custom Files remain even if you remove the disc. If you replace the disc with a new one, "DISC CHANGED" appears in the display. Erase or change the Custom File information if necessary.

Erasing Custom Files

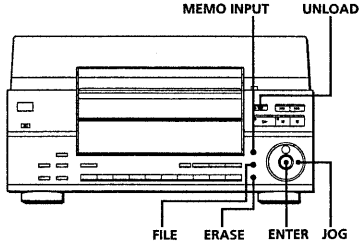
You can erase any unwanted Custom Files as follows:

To erase all Custom Files of one disc
Press UNLOAD to turn on the indicator, then select the disc containing the Custom Files you want to erase. Hold down ERASE until "1 DISC ERASE" appears in the display, and all Custom Files of the disc will be erased.

To erase all Custom Files of all discs
Turn off the player. While holding down ERASE and FILE, press POWER to turn on the player. "ALL ERASE" appears in the display, and all Custom Files will be erased.

Labeling Discs (Disc Memo)

You can label discs using up to 12 characters and have the player display the Disc Memo every time you select the disc. The Disc Memo can be anything you like, such as a title, musician's name, category or date of purchase.



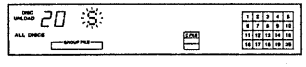
1 Press CONTINUE, then UNLOAD to turn on the indicators.

2 Turn the JOG dial to select the disc to which you want to assign a Disc Memo.

3 Press MEMO INPUT until you find the letter type you want.
Each time you press the button, the display shows capital letters (ABC), small letters (abc) and numbers (123) in this order.

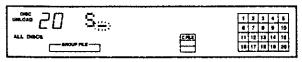
4 Turn the JOG dial until the character you want appears in the display.
When you turn the JOG dial clockwise, the characters appear in the following order. Turn the JOG dial counterclockwise to go back to the previous character.

(space) A B C D E F G H I J K L M N O P Q R S T U V W X Y Z & a b c d e f g h i j k l m n o p q r s t u v w x y z ä ö ü ; : ( ) [ ] % $ # 0 1 2 3 4 5 6 7 8 9 10 → ← * / ! ? ' " , . -



(Continued)

5 Press ENTER.
The selected character lights up, and the flashing cursor moves to the next position.
To insert a space, press CLEAR.

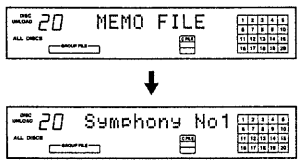


If you have made a mistake
Press ⏮ or ⏭ until the letter you want to change flashes, then enter the right letter.

6 Repeat Steps 4 and 5 to input more characters.
When you want to change the letter type, go back to Step 3.

To stop labeling a disc
While assigning a Disc Memo, hold down MEMO INPUT.
If you are assigning a Disc Memo while playing a disc, or in the stop mode (the UNLOAD button indicator is not lit), press ■.

7 Press FILE to store the Disc Memo.
The Disc Memo appears in the display.



Repeat Steps 2 to 7 to assign a Disc Memo to other discs.

Erasing the Disc Memo

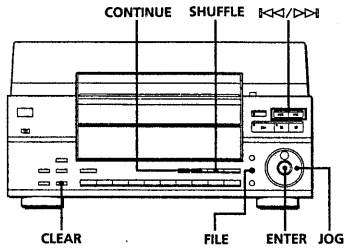
1 Press UNLOAD to turn on the indicator, then select the disc containing the Disc Memo you want to erase.

2 Press MEMO INPUT.
The first letter of the Disc Memo flashes.

3 Press ERASE to erase the Disc Memo.
"FILE ERASE" appears in the display.

Storing Specific Tracks (Delete Bank)

You can delete unwanted tracks and store only the tracks you want. When you select the disc containing a Delete Bank, you can play only the remaining tracks.



1 Press CONTINUE or SHUFFLE repeatedly to select the 1 DISC mode, then turn the JOG dial to select the disc.

2 Press ENTER, then ■.
The disc is set to the playing position, and the music calendar shows the tracks on the current disc.

3 Press ⏮ or ⏭ to select the tracks you want to delete.

4 Press CLEAR.
The track number you have selected disappears from the music calendar.

5 Repeat Steps 3 and 4 to delete more tracks.

6 Press FILE.
"DELETE FILE" appears for a while, and "DELETE" in the Custom File indication lights up in the display.

You can delete the currently playing track
Press CLEAR while an unwanted track is playing, then press FILE.

You can recover all the tracks temporarily
Hold down CLEAR in the stop mode until "ALL SELECT" appears in the display.

You can make a Delete Bank using the remote
In the 1 DISC Shuffle Play mode, press TRACK and enter the track number to be deleted, then press ENTER. The track number disappears from the music calendar.
Repeat this procedure to delete more tracks, then press FILE to store the remaining tracks as a Delete Bank.
To recover a track you have deleted, press TRACK, enter the track number again, then press ENTER.

Note
The deleted tracks are skipped even in the Shuffle or Program Play mode (when the whole disc containing a Delete Bank is programmed as one step).

Erasing the Delete Bank

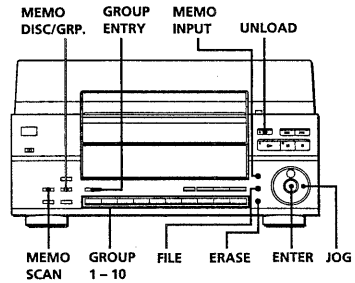
1 Play the disc containing a Delete Bank you want to erase.

2 Press FILE.

3 While "DELETE FILE" is lit in the display, press ERASE.
"FILE ERASE" appears, and the Delete Bank for the selected disc will be erased.

Grouping Discs (Group File)

You might find that too many discs make it hard to find the disc you want. This player has a feature that lets you group discs. When you insert a disc to which you have assigned a group, the group number indication (e.g., Group 1) appears in the display. The player has 10 preset groups, such as "JAZZ" and "POPS," and each group can contain up to 100 discs. You can also put a disc into multiple groups.
You can enjoy Continuous, Shuffle, or Repeat Play only within a certain group (Group Play). You can also scan groups (Group Scan) or discs in a specific group to find the group or the disc you want quickly.



Assigning group names

Before you group discs, find the group you want. Each group name appears in the display when you press the corresponding GROUP 1 – 10 button.

Press GROUP	To display
1	Group 1 JAZZ
2	Group 2 POPS
3	Group 3 CLASSICAL
4	Group 4 ROCK
5	Group 5 R & B
6	Group 6 BALLADE
7	Group 7 C & W
8	Group 8 FOR FATHER
9	Group 9 FOR MOTHER
10	Group 10 FOR CHILD

(Continued)

If you want to change the group names, do the following:

1 Press one of GROUP 1 – 10 to select the group.
The preset group name appears in the display.

2 While the group name is lit in the display, press MEMO INPUT until you find the letter type you want.
The first letter of the group name flashes. Each time you press the button, the display shows capital letters (ABC), small letters (abc) and numbers (123) cyclically.

3 Turn the JOG dial to select a character, then press ENTER.
The selected character lights up, and the flashing cursor moves to the next position.

4 Repeat Step 3 to enter more characters.

5 Press FILE.
The group name is stored. You can enter up to 12 characters for a group name. See also "Labeling Discs (Disc Memo)" on page 15 for details.

Putting discs into groups

1 Press CONTINUE and then UNLOAD.

2 Turn the JOG dial to select the disc which you want to put into a group.

3 Press GROUP ENTRY.
"GROUP ENTRY" appears in the display, and the navigation display asks you to select one of the groups.

4 Press one of GROUP 1 – 10 to select a group.
The group name appears for a while, then "GROUP FILE" appears, and the group number indication lights up in the display.

You can put the currently playing disc into a group
While playing the disc, follow Steps 3 and 4 above.

Playing discs in a group (Group Play)

You can enjoy Continuous or Shuffle Play within a group.

1 Before you start playing, select the play mode by pressing CONTINUE or SHUFFLE.

When you select	The player plays
Continuous Play	All discs in the group consecutively
ALL DISCS Shuffle Play	All tracks on all discs in the group in random order
1 DISC Shuffle Play	All tracks on the specified disc in the group in random order

2 Press one of GROUP 1 – 10 to select the group.
Group Play starts from the disc which is located closest to the playing position. If the disc in the playing position is put into the selected group, the play starts from that disc.

3 When you want to start Group Play from the disc you want, turn the JOG dial to select the disc, then press ENTER. (You can skip this step if you do not have any particular disc to start with.)
Group Play starts from the selected disc.

To cancel Group Play
Press ■. "GROUP OFF" appears in the display.

You can start Group Play with the remote
Before you start playing, press GROUP, the number button of the group you want to play, then ENTER.

You can switch the display indication between the group name and the Disc Memo during Group Play
Each time you press MEMO DISC/GRP., the group name and the current Disc Memo appear in the display alternately.

Notes
- If "–NO ENTRY–" appears in the display, no disc has been put into the selected group.
- If "–ENTRY END–" appears in the display, all the disc numbers in the group are checked while turning the JOG dial to specify the next disc. Turn the dial counterclockwise to display the disc numbers in reverse order.

Locating a disc within a group by scanning each Disc Memo

You can locate a disc you want to play within a specific group quickly by scanning the Disc Memo in the display and start Group Play.
Note that you cannot use this function in the ALL DISCS Shuffle and Program Play mode.

1 Press one of GROUP 1 – 10 to select the group.
The group name appears in the display.

2 Press MEMO SCAN repeatedly until "MEMO SCAN" appears in the display.
The Disc Memos of the discs in the selected group scroll in the display.

3 Press ENTER or ▷ when the Disc Memo of the disc you want appears.
Group Play starts from the selected disc.

You can jump to the next or preceding Disc Memo while scanning
Press ⏮ or ⏭.

Locating a group by scanning each group name (Group Scan)

You can locate a group you want to play quickly by scanning the group names in the display and start Group Play.
Note that you cannot use this function in the ALL DISCS Shuffle and Program Play mode.

1 Before you start playing, press MEMO SCAN repeatedly until "GROUP SCAN" appears in the display.
The group names scroll in the display.

2 Press ENTER or ▷ when the group name you want appears.
Group Play starts.

You can jump to the next or preceding group while scanning
Press ⏮ or ⏭.

Deleting discs from a group

1 Press CONTINUE and then UNLOAD.

2 Turn the JOG dial to select the disc which you want to delete from a group.

3 Press GROUP ENTRY.
"GROUP ENTRY" appears in the display, and the navigation display asks you to select one of the groups.

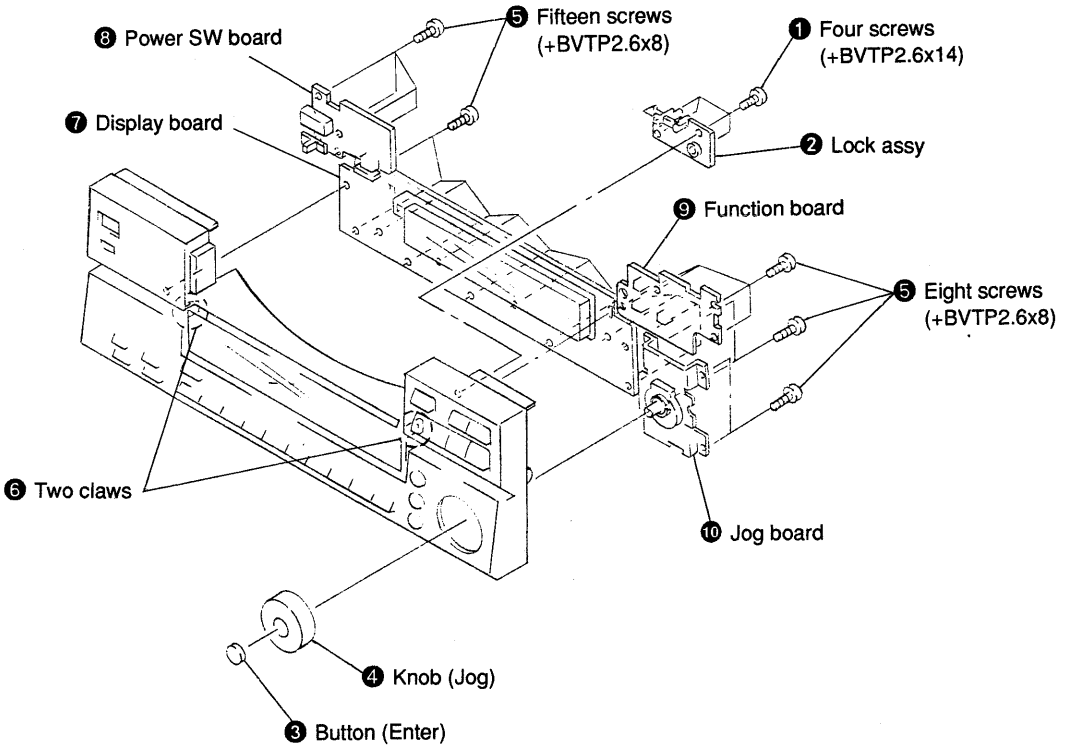
4 Press one of GROUP 1 – 10 to select a group.
The group name appears for a while, then "GROUP FILE" appears, and the group number indication lights up in the display.

5 While "GROUP FILE" is lit in the display, press ERASE.
"FILE ERASE" appears, and the group number indication disappears from the display.

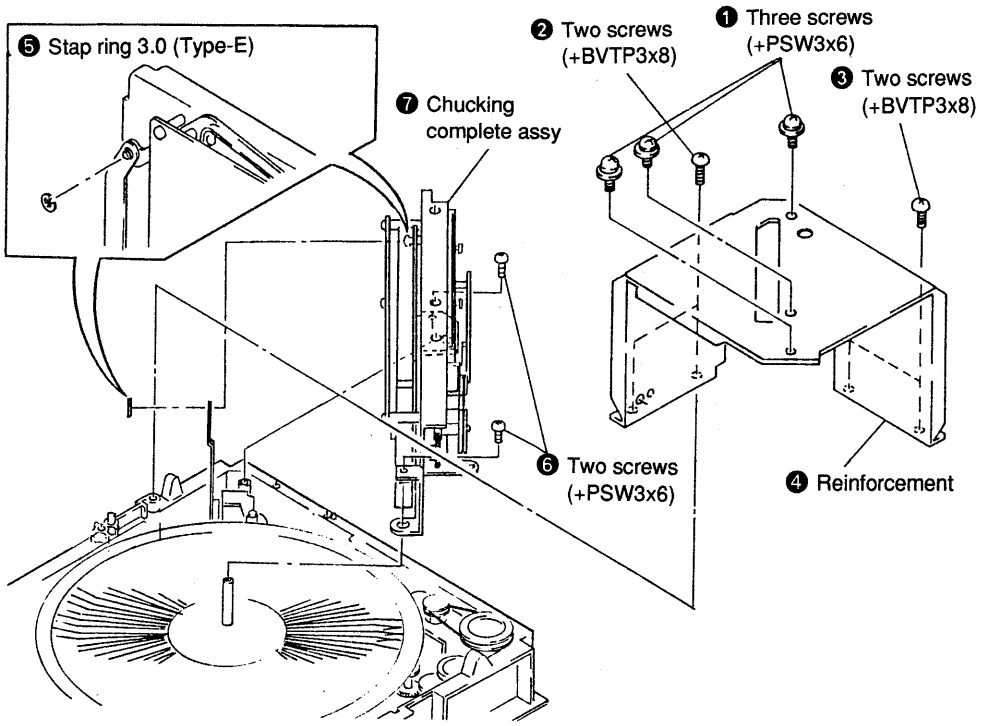
You can delete the currently playing disc from a group
While playing the disc, follow Steps 3 to 5 above.

SECTION 3
DISASSEMBLY

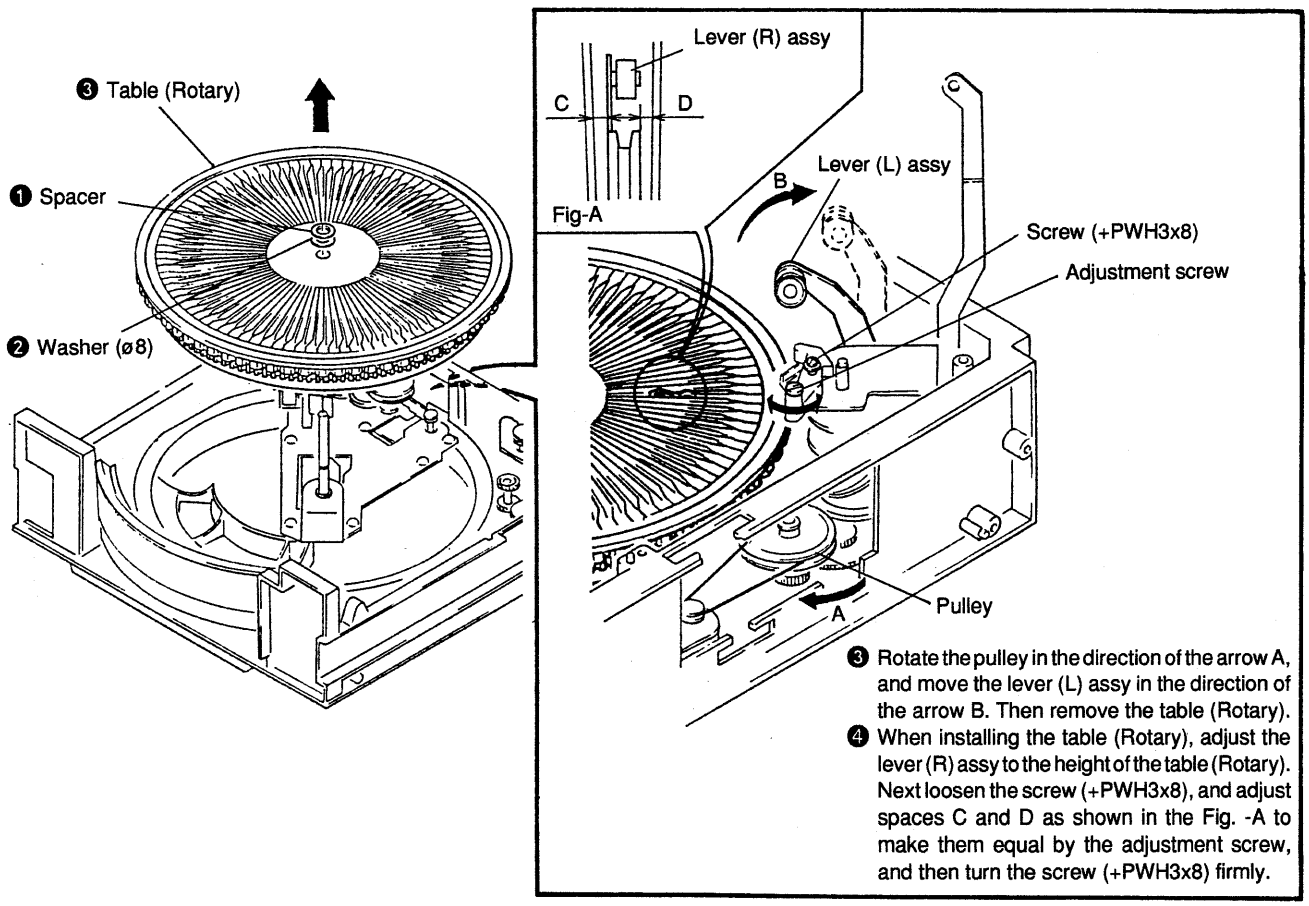
3-1. BOARDS OF FRONT PANEL



3-2. CD MECHANISM DECK (1)



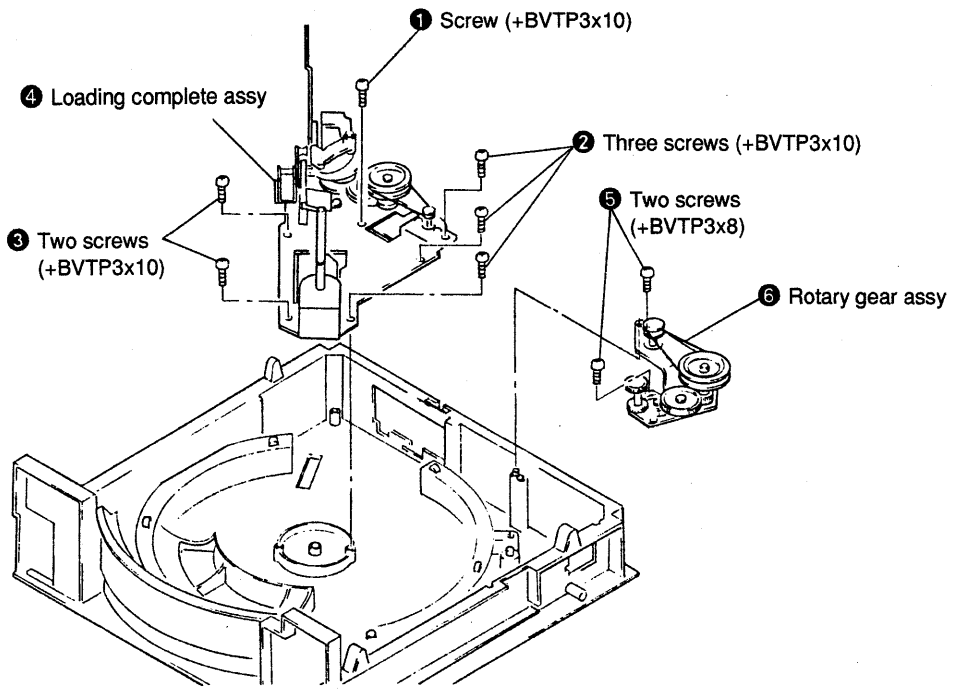
3-3. TABLE (ROTARY)



❸ Rotate the pulley in the direction of the arrow A, and move the lever (L) assy in the direction of the arrow B. Then remove the table (Rotary).

❹ When installing the table (Rotary), adjust the lever (R) assy to the height of the table (Rotary). Next loosen the screw (+PWH3x8), and adjust spaces C and D as shown in the Fig. -A to make them equal by the adjustment screw, and then turn the screw (+PWH3x8) firmly.

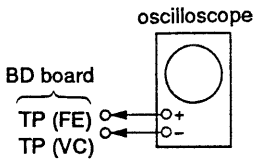
3-4. CD MECHANISM DECK (2)



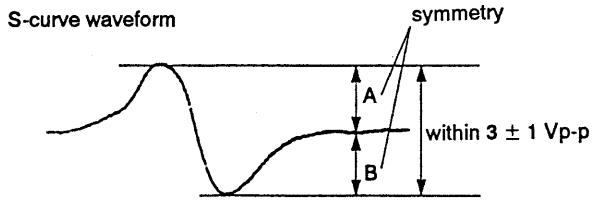
SECTION 4
ELECTRICAL ADJUSTMENTS

Note:
1. Adjust or check each item in order given.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use the oscilloscope with more than 10 MΩ impedance.
4. Clean an object lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.

S-Curve Check



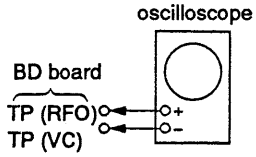
Procedure:
1. Connect oscilloscope to test point TP (FE) on BD board.
2. Connect between test point TP (FEI) and TP (VC) by lead wire.
3. Turned Power switch on.
4. Playback the disc (YEDS-18) and actuate the focus search. (actuate the focus search when disc table is moving in and out.)
5. Check the oscilloscope waveform (S-curve) is symmetrical between A and B. And confirm peak to peak level within 3 ± 1Vp-p.



6. After check, remove the lead wire connected in step 2.

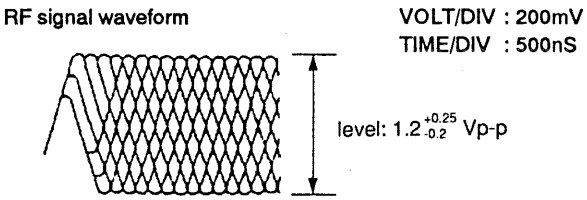
Note:
- Try to measure several times to make sure that the ratio of A : B or B : A is more than 10 : 7.
- Take sweep time as long as possible and light up the brightness to obtain best waveform.

Focus Offset Adjustment

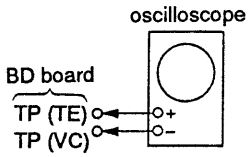


Procedure:
1. Connect oscilloscope to test point TP (RFO) on BD board.
2. Turn Power switch on.
3. Put disc (YEDS-18) in and playback.
4. Adjust RV102 on RF board so that the oscilloscope waveform is clear and check RF signal level is correct or not.

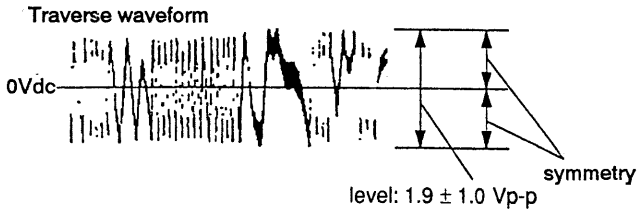
Note: Clear RF signal waveform means that the shape "◇" can be clearly distinguished at the center of the waveform.



Tracking Offset Adjustment



Procedure:
1. Connect test point TP (ADJ) on MAIN board to ground and TP (TEI) on BD board to TP (VC) with lead wire.
2. Connect oscilloscope to test point TP (TE) on BD board.
3. Turn Power switch on.
4. Put disc (YEDS-18) in and playback.
5. Adjust RV101 on RF board so that the oscilloscope waveform is symmetrical on the top and bottom in relation to 0 Vdc, and check this level.

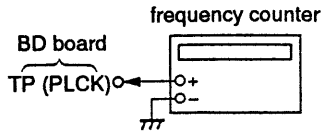


6. Remove the lead wire connected in step 1.

RF PLL Free-run Frequency Check

Procedure:

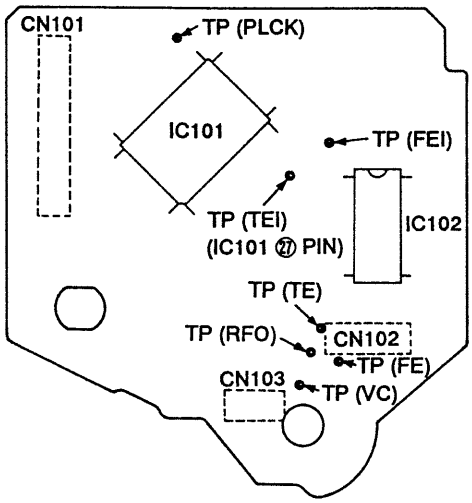
1. Connect frequency counter to test point (PLCK) with lead wire.



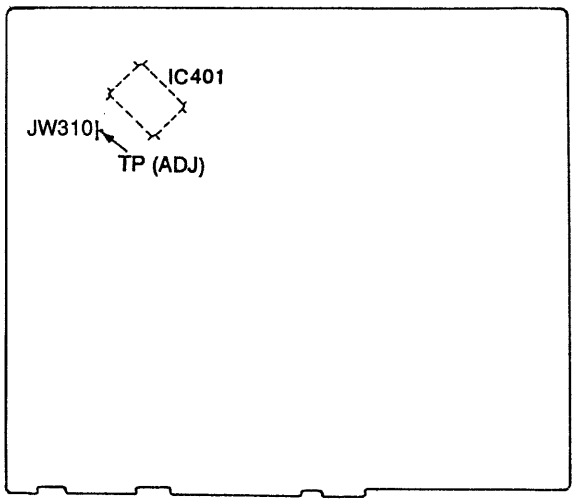
2. Turn Power switch on.
3. Confirm that reading on frequency counter is 4.3218 MHz.

Adjustment Location:

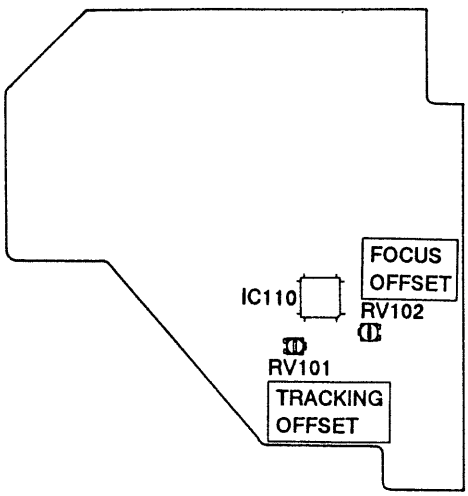
【BD BOARD】
— Conductor side —



【MAIN BOARD】
— Component side —



【RF BOARD】
— Component side —



SECTION 5
IC PIN FUNCTIONS

- **IC101 DSP Controller (CXD2515Q)**

Functions effected by the captioned controller include focus (tracking/sled servo) EFM comparator, digital signal processor and CLV servo in the CD unit.

Pin No.	Pin Name	I/O	Description
1	SRON	O	Sled drive signal output. (Not in use with the model.)
2	SRDR	O	Sled drive signal output.
3	SFON	O	Sled drive signal output. (Not in use with the model.)
4	TFDR	O	Tracking drive signal output.
5	TRON	O	Tracking drive signal output. (Not in use with the model.)
6	TRDR	O	Tracking drive signal output.
7	TFON	O	Tracking drive signal output. (Not in use with the model.)
8	FFDR	O	Focus drive signal output.
9	FRON	O	Focus drive signal output. (Not in use with the model.)
10	FRDR	O	Focus drive signal output.
11	FFON	O	Focus drive signal output. (Not in use with the model.)
12	VCOO	O	Output of oscillation circuit for analog EFM PLL. (Not in use with the model.)
13	VCOI	I	Input of oscillation circuit for analog EFM PLL. The equipment is fixed at "L".
14	TEST	I	Test terminal. Normally: ground.
15	DVss	–	Digital ground terminal.
16	TEST2	I	Test terminal. Normally: ground.
17	TEST3	I	Test terminal. Normally: ground.
18	PDO	O	Output of charge-pump for analog EFM PLL. (Not in use with the model.)
19	VPCO	O	Output of charge-pump for variable pitch PLL. (Not in use with the model.)
20	VCKI	I	Clock signal input from VCO for variable pitch. The equipment is fixed at "L".
21	AVD2	–	Analog power supply terminal.
22	IGEN	I	Power supply terminal for operational amplifier.
23	AVS2	–	Analog ground terminal.
24	ADII	I	A/D converter input.
25	ADIO	O	Operational amplifier output.
26	RFDC	I	RF signal input.
27	TE	I	Tracking error signal input.
28	SE	I	Sled error signal input.
29	FE	I	Focus error signal input.
30	VC	I	Center voltage input.

Pin No.	Pin Name	I/O	Description
31	FILO	O	Output of filter for master PLL.
32	FILI	I	Input of filter for master PLL.
33	PCO	O	Output of charge-pump for master PLL.
34	CLTV	I	Input of control voltage for master VCO.
35	AVS1	–	Analog ground terminal.
36	RFAC	I	EFM signal input.
37	BIAS	I	Input of constant current for auto-assymmetry circuit.
38	ASYI	I	Auto-assymmetry comparator voltage input.
39	ASYO	O	EFM full-swing output.
40	AVD1	–	Analog power supply terminal.
41	DVDD	–	Digital power supply terminal.
42	ASYE	I	ON/OFF control of auto-assymmetry circuit. The equipment is fixed at "H".
43	PSSL	I	Input of output mode select for audio data. The equipment is fixed at "L".
44	WDCK	O	48 bit slot D/A interface word-clock output. (Not in use with the model.)
45	LRCK	O	48 bit slot D/A interface LR-clock output.
46	DATA	O	PSSL=1: DA16 output, PSSL=0: Serial data of 48 bit slot.
47	BCLK	O	PSSL=1: DA15 output, PSSL=0: Bit clock of 48 bit slot.
48	64DATA	O	PSSL=1: DA14 output, PSSL=0: Serial data of 64 bit slot. (Not in use with the model.)
49	64BCLK	O	PSSL=1: DA13 output, PSSL=0: Bit clock of 64 bit slot. (Not in use with the model.)
50	64LRCK	O	PSSL=1: DA12 output, PSSL=0: LR clock of 64 bit slot. (Not in use with the model.)
51	GTOP	O	PSSL=1: DA11 output, PSSL=0: GTOP output.(Not in use with the model.)
52	XUGF	O	PSSL=1: DA10 output, PSSL=0: XUGF output. (Not in use with the model.)
53	XPLCK	O	PSSL=1: DA09 output, PSSL=0: XPLCK output.
54	GFS	O	PSSL=1: DA08 output, PSSL=0: GFS output.
55	PFCK	O	PSSL=1: DA07 output, PSSL=0: PFCK output.
56	C2PO	O	PSSL=1: DA06 output, PSSL=0: C2PO output. (Not in use with the model.)
57	XRAOF	O	PSSL=1: DA05 output, PSSL=0: XRAOF output. (Not in use with the model.)
58	MNT3	O	PSSL=1: DA04 output, PSSL=0: MNT3 output.
59	MNT2	O	PSSL=1: DA03 output, PSSL=0: MNT2 output.
60	MNT1	O	PSSL=1: DA02 output, PSSL=0: MNT1 output.
61	MNT0	O	PSSL=1: DA01 output, PSSL=0: MNT0 output.
62	XTAI	I	X'tal oscillation circuit input.
63	XTAO	O	X'tal oscillation circuit output. (Not in use with the model.)
64	XTSL	I	X'tal select input. The equipment is fixed at "L".
65	DVss	–	Digital ground terminal.

Pin No.	Pin Name	I/O	Description
66	FSTI	I	2/3 divide input of ⑫, ⑬ pin.
67	FSTO	O	2/3 divide output of ⑫, ⑬ pin.
68	C4M	O	4.2336MHz output. (Not in use with the model.)
69	C16M	O	16.9344MHz output. (Not in use with the model.)
70	MD2	I	Digital out ON/OFF control terminal. The equipment is fixed at "H".
71	DOUT	O	Output of digital out signal.
72	EMPH	O	Emphasis mode select output of playback disc. (Not in use with the model.)
73	WFCK	O	WFCK output.
74	SCOR	O	Sub-code sync output.
75	SBSO	O	Serial output of sub P-W. (Not in use with the model.)
76	EXCK	I	Input of clock signal for SBSO read out. (Fixed at "L".)
77	SUBQ	O	Sub-Q 80-bit output.
78	SQCK	I	Clock input for SQSO read-out.
79	MUTE	I	Muting select pin.
80	SENS	O	Sense signal output.
81	XRST	I	System reset signal input.
82	DIRC	I	Used for 1 track jump.
83	SCLK	I	Input of clock signal for read the sens serial data.
84	DFSW	I	DFCT select terminal. The equipment is fixed at "L".
85	ATSK	I	Antch-shock terminal. The equipment is fixed at "L".
86	DATA	I	Serial data input from IC401 (system control).
87	XLAT	I	Latch signal input from IC401 (system control).
88	CLOK	I	Serial data transfer clock input from IC401 (system control).
89	COUT	O	Track count signal output. (Not in use with the model.)
90	DV_{DD}	–	Digital power supply terminal.
91	MIRR	O	MIRR signal output. (Not in use with the model.)
92	DFCT	O	Deffect signal output. (Not in use with the model.)
93	FOK	O	Focus OK output.
94	FSW	O	Output of filter select for spindle motor. (Not inuse with the model.)
95	MON	O	Output of ON/OFF control for spindle motor.
96	MDP	O	Output of servo control for spindle motor.
97	MDS	O	Output of servo control for spindle motor.
98	LOCK	O	Sled run-away prevention circuit operates when this signal is "L". (Not in use with the model.)
99	SSTP	I	The limit switch is connected to this pin.
100	SFDR	O	Sled drive signal output.

- **IC401 Main System Controller (M37451M4-453FP)**

Functions effected by the captioned controller include IC101 (Digital signal processsing, servo) and loading motor control, data exchange with IC801 (sub system controller).

Pin No.	Pin Name	I/O	Description
1	NC	–	No connection.
2	NC	–	
3	SENSE	I	Input of SENSE signal for COUT count from IC101 (CXD2515Q).
4	NC	–	No connection.
5	QINT	O	Command pulse output to sub system controller (IC801).
6	SACK	O	Command acknowridge output to sub system controller (IC801).
7	MREQ	I	Command request input from sub system controller (IC801).
8 to 11	CMD3 to CMD0	I/O	Input and output of data exchange with sub system controller (IC801).
12	LATCH	O	Attenuator data latch pulse output to IC301 (CXD2565M).
13	SHIFT	O	Attenuator data clock output to IC301 (CXD2565M).
14	ATT	O	Attenuator data output to IC301 (CXD2565M).
15	NC	–	No connection.
16	NC	–	
17	SENS3	I	Input signal from IC811 (Disc (A) sensor).
18	SENS2	I	Input signal from IC810 (Address sensor).
19	SCOR	I	Sub-code sync (S0+S1) detection input from IC101 (CXD2515Q).
20	NC	–	No connection.
21	NC	–	
22	NC	–	
23	NC	–	
24	NC	–	
25	GND	–	Ground terminal. (GND)
26	$\overline{\text{RESET}}$	I	Reset signal input. "L": RESET
27	NC	–	No connection.
28	XIN	I	Clock signal input. (10 MHz)
29	XOUT	O	Clock signal output.
30	NC	–	No connection.
31	NC	–	
32	VSS	–	Ground terminal. (GND)
33	CLK	O	Data clock signal output to IC101 (CXD2515Q).
34	DATA	O	Data signal output to IC101 (CXD2515Q).
35	MUTE	O	Muting signal output.
36	GFS	I	GFS signal input from IC101 (CXD2515Q). "L": NG, "H": OK
37	FOK	I	FOK signal input from IC101 (CXD2515Q). "L": NG, "H": OK
38	LDON	O	Laser ON/OFF control output optical pick-up block. (IC110)
39	XLT	O	Data latch pulse signal output to IC101 (CXD2515Q).
40	SCLK	O	Calculation readout clock output to IC101 (CXD2515Q).
41	NC	–	No connection.
42	NC	–	
43	NC	–	
44	NC	–	
45	SENS1	I	Input signal from IC810 (Disc sensor).

Pin No.	Pin Name	I/O	Description
46	M1L	O	Output to rotate M803 (Table motor) left. *1
47	M1R	O	Output to rotate M803 (Table motor) right. *1
48	M2 IN	O	Output to rotate M802 (Loading motor) in the loading in direction. *2
49	M2 OUT	O	Output to rotate M802 (Loading motor) in the loading out direction. *2
50	M3 OUT	O	Output to rotate M801 (Chucking motor) in the chucking out direction. *3
51	M3 IN	O	Output to rotate M801 (Chucking motor) in the chucking in direction. *3
52	DISC SW	I	Input of S842 (Disc det switch).
53	NC	–	No connection.
54	DISC UP	I	Input of S843 (Loading det switch). "L": DISC UP
55	DISC DWN	I	Input of S843 (Loading det switch). "L": DISC DOWN
56	CHK ON	I	Input of S844 (Chucking up/down det switch). "L": CHUCKING ON
57	CHK OFF	I	Input of S844 (Chucking up/down det switch). "L": CHUCKING OFF
58	AFADJ	I	Test mode terminal. It is possible to check the interface between the sub system controller (IC801) and this controller (IC401).
59	ADJ	I	Test mode terminal. GFS is no longer monitored during PLAY, PAUSE or SEARCH, while not stopping even with GFS remaining still at "L" (NG).
60	NC	–	} No connection.
61	NC	–	
62 to 65	TP3 to TP0	O	Test point.
66	NC	–	} No connection.
67	NC	–	
68	DAVREF	–	Input terminal of reference voltage D/A input port.
69	ADVREF	–	Input terminal of reference voltage A/D input port.
70	AVSS	–	Ground terminal. (GND)
71	AVCC	–	} Power supply terminal. (+5V)
72	VCC	–	
73	VSS	–	Ground terminal. (GND)
74	NC	–	No connection.
75	SQCLK	O	Subcode Q data readout clock output to IC101 (CXD2515Q).
76	NC	–	No connection.
77	SUB Q	I	Subcode Q data input from IC101 (CXD2515Q).
78	NC	–	} No connection.
79	NC	–	
80	NC	–	

*1. Table motor control

	LEFT	RIGHT	BRAKE
M1L ㊻	PULSE	"L"	"H"
M2R ㊼	"L"	PULSE	"H"

*2. Loading motor control

	IN	OUT	BRAKE
M2 IN ㊽	"H"	"L"	"H"
M2 OUT ㊾	"L"	"H"	"H"

*3. Chucking motor control

	IN	OUT	BRAKE
M3 OUT ㊿	"L"	"H"	"H"
M3 IN (51)	"H"	"L"	"H"

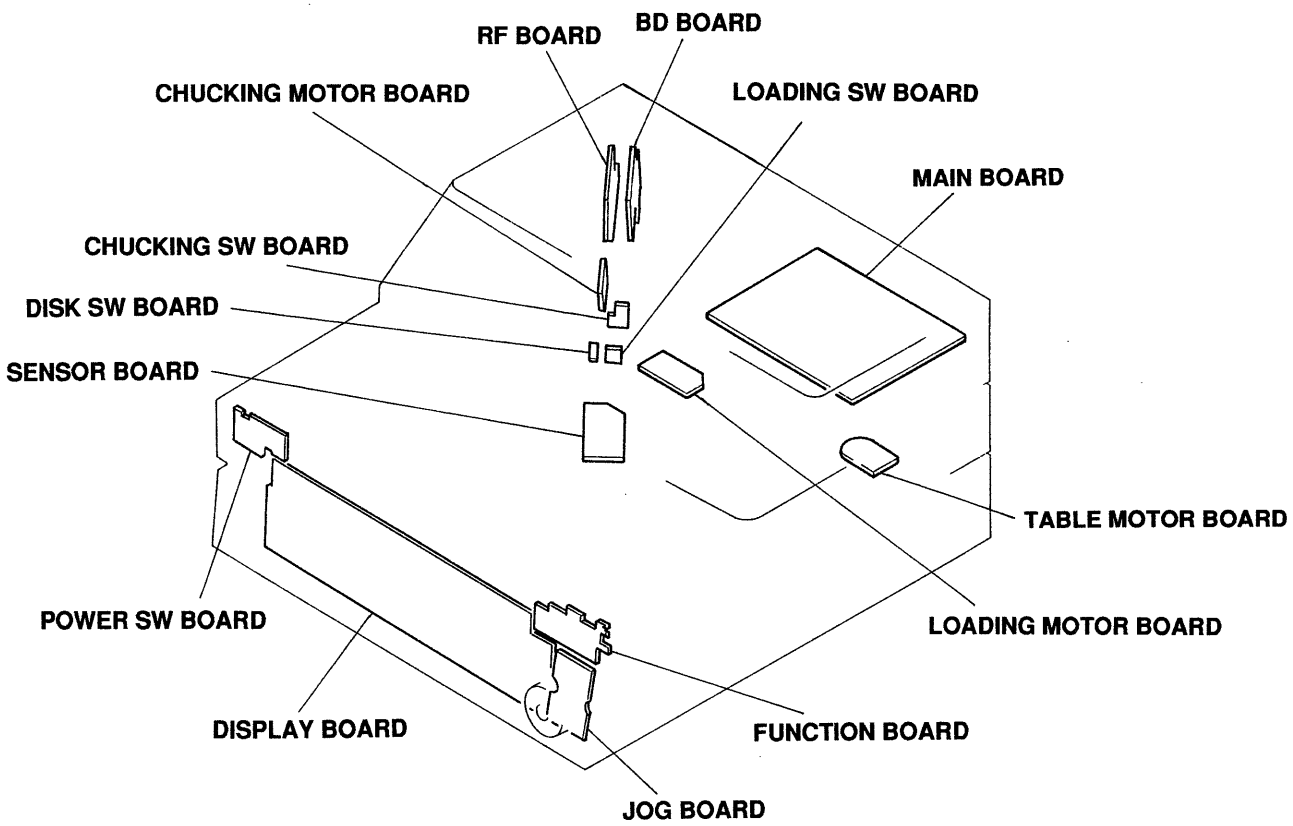
- **IC801 SUB SYSTEM CONTROLLER (MB89647PF-111)**

Pin No.	Pin Name	I/O	Description
1	MTEST	I	Mechanism microprocessor test pin. Normally High.
2	U-J	I	Japan: High. Overseas: Low.
3	TEST	I	Master microprocessor check pin. Normally High.
4	TIMER	I	Panel TIMER SW.
5	JOG1	I	JOG input.
6	JOG2	I	
7	QINT	I	Mechanism microprocessor communication.
8	RM IN	I	Remote control input.
9	GND	–	GND
10	NC	–	No connection.
11	GND	–	GND
12	GND	–	
13	XO	O	Clock oscillation output (10 MHz).
14	X1	I	Clock oscillation input (10 MHz).
15	VSS	–	GND
16	RESET	I	Reset input.
17	PLAY LED	O	Internal lighting LED output.
18	PAUSE LED	O	
19	UNLOAD LED	O	
20	A12	O	S-RAM address line.
21	A11	O	
22	A10	O	
23	A9	O	
24	A8	O	
25	A7	O	
26	A6	O	
27	A5	O	
28	A4	O	
29	A3	O	
30	A2	O	
31	A1	O	
32	A0	O	
33	D7	I/O	S-RAM data line (input/output).
34	D6	I/O	
35	D5	I/O	
36	D4	I/O	
37	D3	I/O	
38	D2	I/O	
39	D1	I/O	
40	D0	I/O	

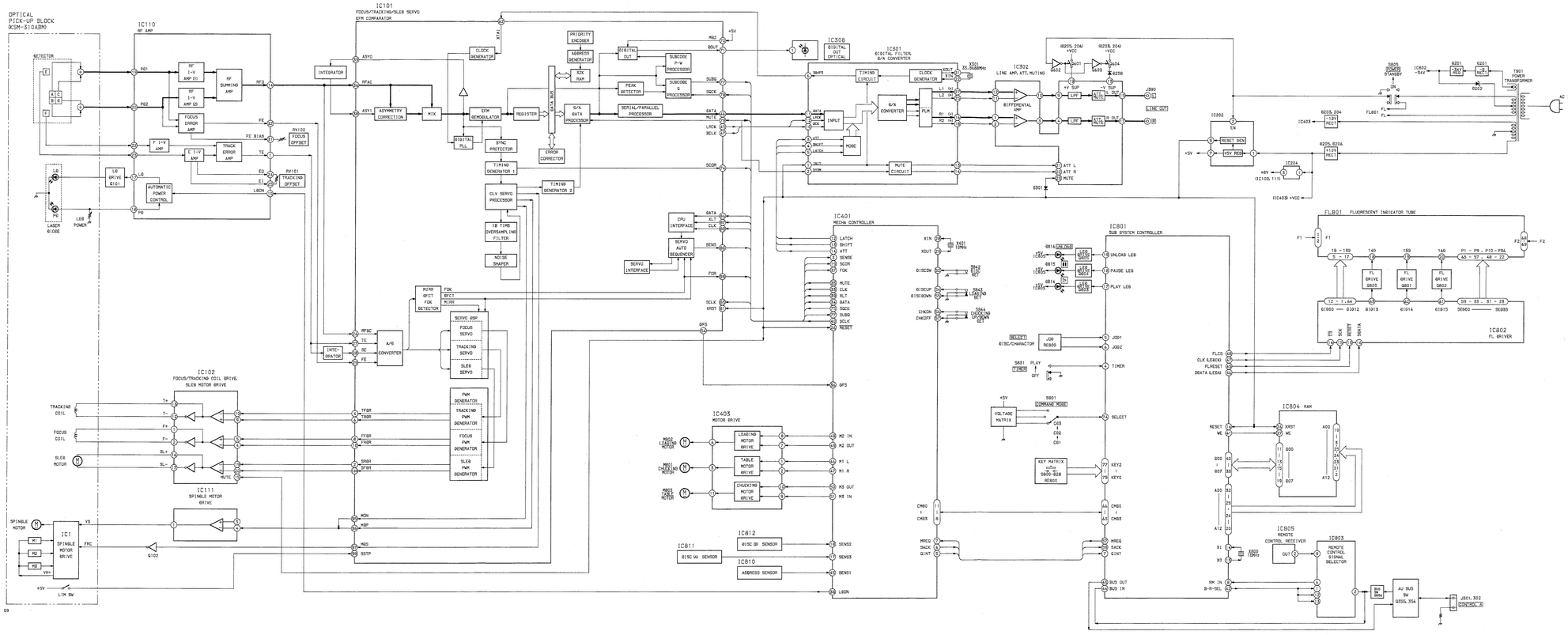
Pin No.	Pin Name	I/O	Description
41	$\overline{WE}$	O	S-RAM write enable. Low active.
42	B-R-SEL	O	AU BUS select output.
43	BUS-OUT	O	AU BUS signal output.
44	BUS-IN	I	AU BUS monitor signal input.
45	FL RESET	O	FL driver reset output.
46	FL DATA	O	FL driver communication data.
47	FL CLK	O	FL driver communication clock.
48	FL CS	O	FL driver CS pin. Reading when low.
49	———	–	Test pin
50	———	–	
51	———	–	
52	NC	–	No connection.
53	NC	–	
54	NC	–	
55	VCC	–	+5V power supply.
56	NC	–	No connection.
57	MREQ	O	Mechanism microprocessor communication.
58	VSS	–	GND
59	SACK	I	Mechanism microprocessor communication.
60	———	–	Test pin
61	———	–	
62	———	–	
63	CMD3	I/O	Mechanism microprocessor communication. (Data)
64	CMD2	I/O	
65	CMD1	I/O	
66	CMD0	I/O	
67	DAVC	–	+5V power supply.
68	AVCC	–	
69	AVRH	–	
70	AVRL	–	GND
71	AVSS	–	
72	———	–	
73	———	–	
74	SELECT	I	Remote control switching, CD1/CD2/CD3.
75	VOL LEVEL	I	Volume AD input.
76	KEY3	I	Pull up.
77	KEY2	I	Key input.
78	KEY1	I	
79	KEY0	I	
80	P74	I	Pull up.

SECTION 6
DIAGRAMS

6-1. CIRCUIT BOARDS LOCATION



6-2. BLOCK DIAGRAM



6-3. PRINTED WIRING BOARD — MAIN SECTION —

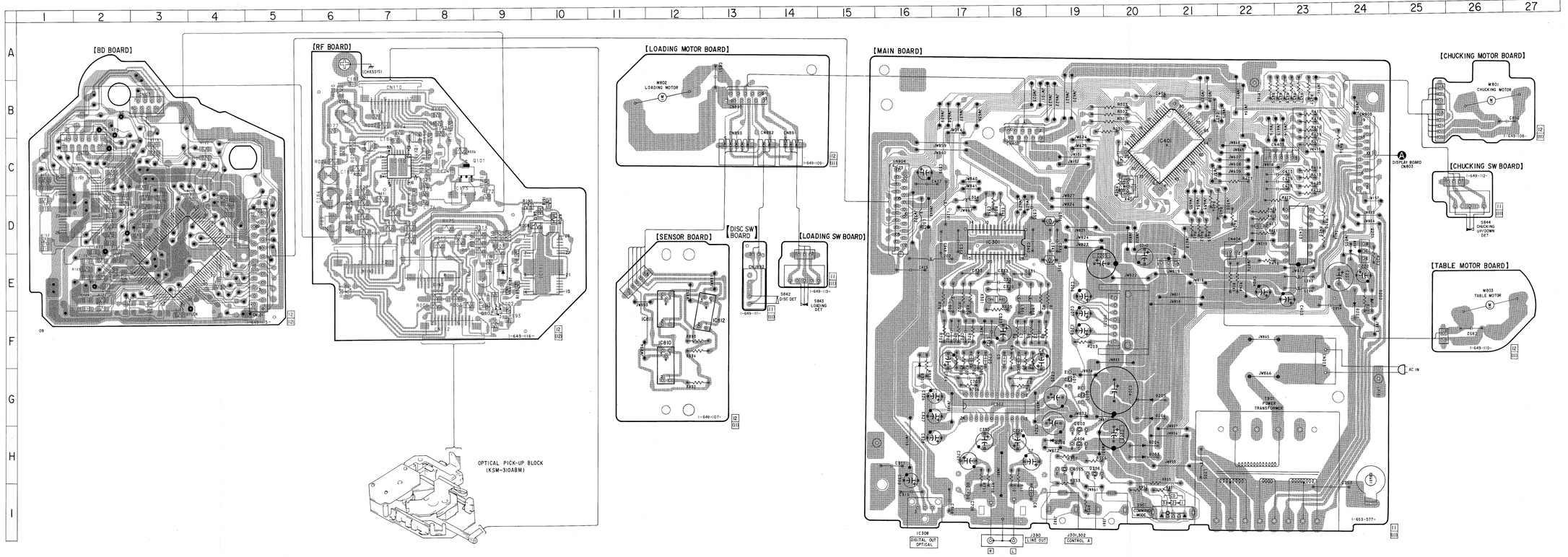
- See page 22 for Circuit Boards Location.
- See page 41 for Semiconductor Lead Layouts.

- Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D101	E-9	IC302	G-18
D201	F-24	IC308	I-16
D202	F-24	IC401	C-21
D203	H-20	IC403	D-23
D204	H-20	IC810	F-12
D205	G-20	IC811	F-12
D206	G-20	IC812	F-12
D207	E-24		
D208	H-19	Q101	C-8
D301	G-16	Q102	F-6
		Q201	E-24
IC101	D-3	Q355	H-19
IC102	C-2	Q356	H-19
IC110	C-7	Q601	G-19
IC111	E-10	Q602	G-19
IC202	F-20	Q603	H-19
IC204	E-21	Q604	H-19
IC301	D-17		

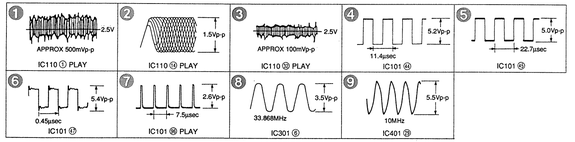
Note:

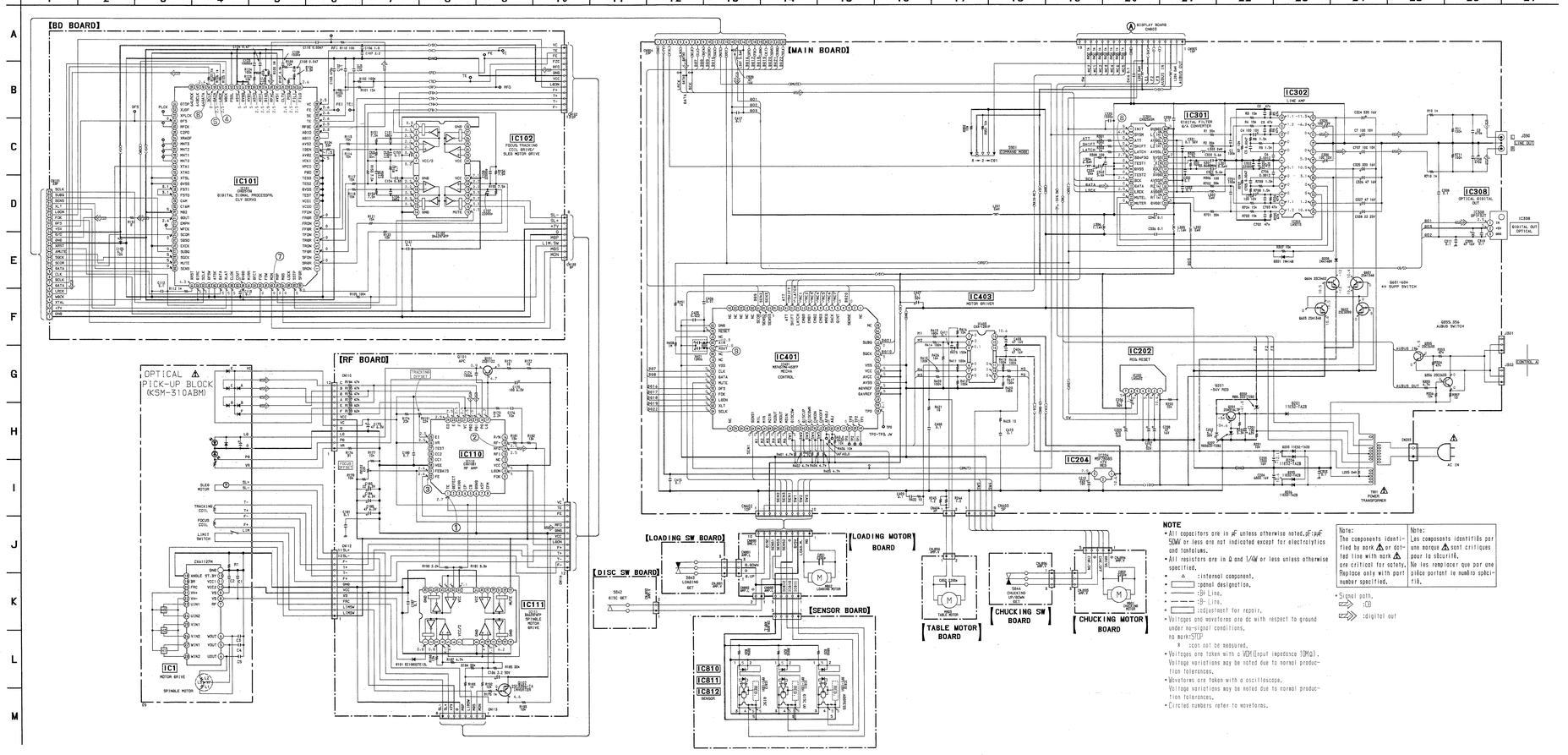
- ○——: parts extracted from the component side.
- ●: Through hole.
- △: internal component.
- ▒▒: Pattern from the side which enable seeing.
- ▒▒: Pattern of the rear side.



6-4. SCHEMATIC DIAGRAM — MAIN SECTION —

• See page 15 for IC Pin Functions. (IC101, 401, 801)





NOTE

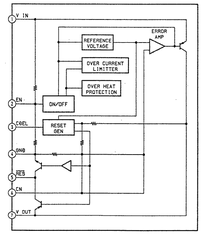
- All capacitors are in μF unless otherwise noted. pF: μμF. 50V or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- △ : internal component.
- ▭ : panel designation.
- ▬ : 3H Line.
- ▬ : 3h Line.
- ▭ : adjustment for repair.
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
  no mark: STOP
  * : can not be measured.
- Voltages are taken with a VOM (input impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.

Note:	Note:
The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

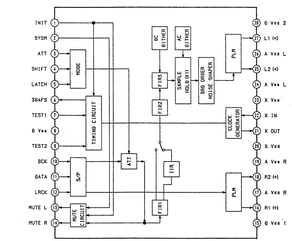
• Signal path.
⇨ : (D)
⇨ : (digital) out

• IC Block Diagrams

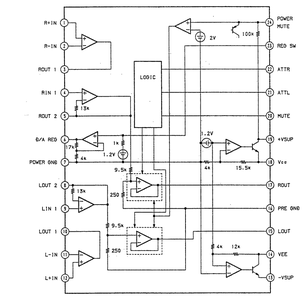
IC202 LA5602



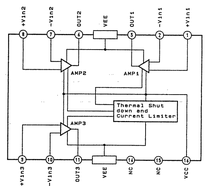
IC301 CXD2565M



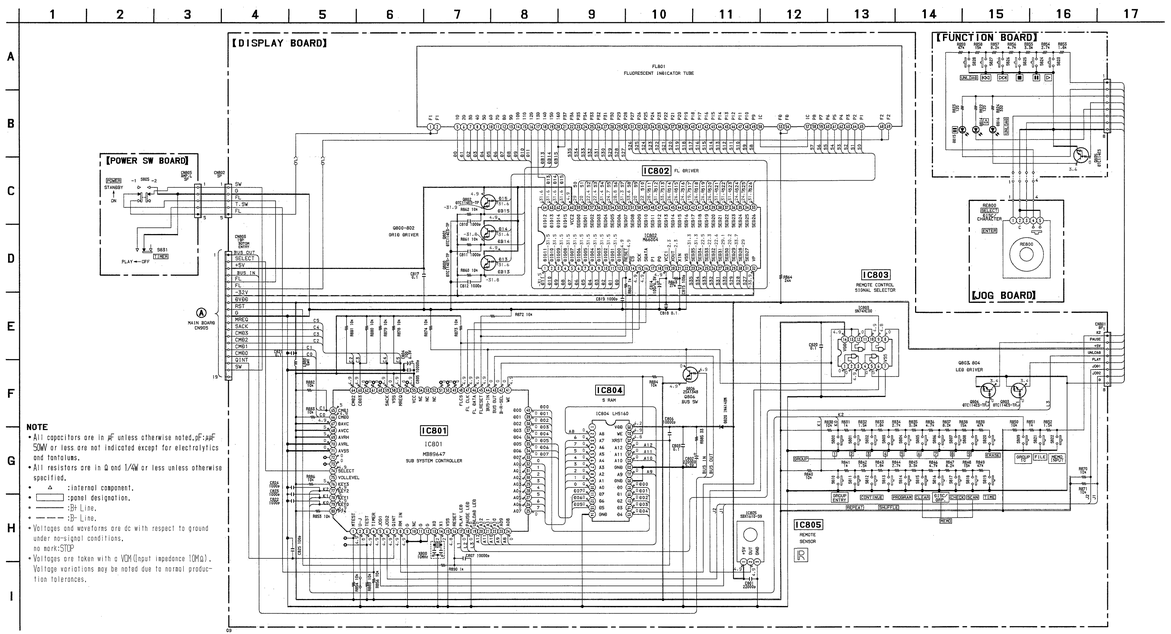
IC302 LA9215



IC403 CXA1291P

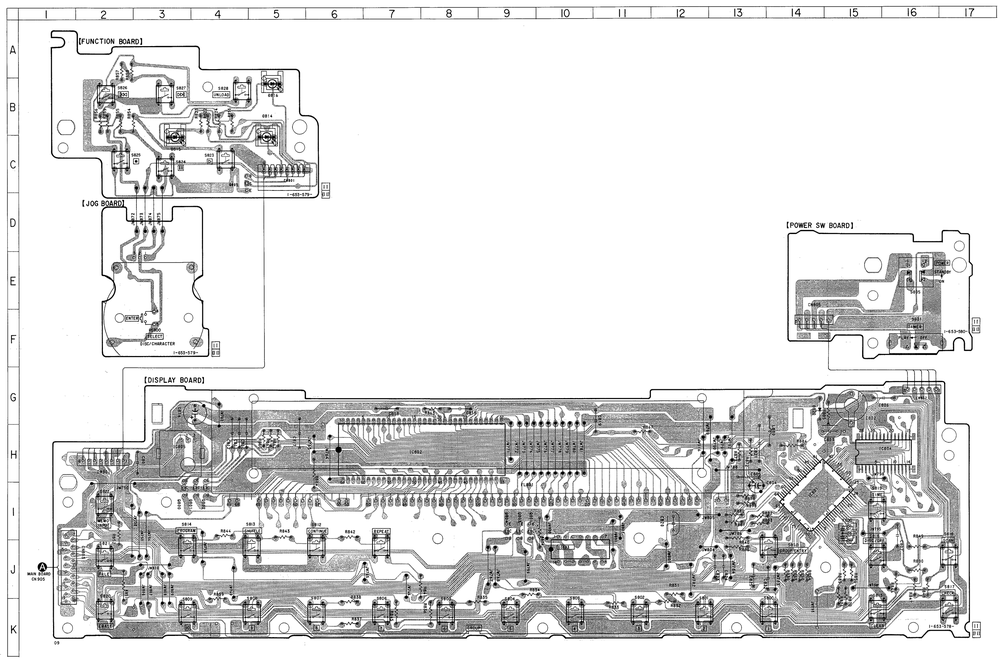


6-5. SCHEMATIC DIAGRAM — DISPLAY SECTION —


[DISPLAY BOARD]
[POWER SW BOARD]
[FUNCTION BOARD]
[JOG BOARD]
FL801
FLUORESCENT INDICATOR TUBE
IC802 FL DRIVER
IC803 REMOTE CONTROL SIGNAL SELECTOR
IC804 S RAM
IC801 MB89647 SUB SYSTEM CONTROLLER
IC805 REMOTE SENSOR
Q802-803 GRID DRIVER
Q804 LED DRIVER
MAIN BOARD CN800
NOTE
• All capacitors are in μF unless otherwise noted. pF: μμF 50W or less are not indicated except for electrolytics and tantalums.
• All resistors are in Ω and 1/4W or less unless otherwise specified.
• △ : internal component.
• ▭ : panel designation.
• ——— : B+ Line.
• — — — : B− Line.
• Voltages and waveforms are dc with respect to ground under no-signal conditions. no mark: STOP
• Voltages are taken with a VOM (Input impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.

6-6. PRINTED WIRING BOARD — DISPLAY SECTION —

• See page 22 for Circuit Boards Location.
• See page 41 for Semiconductor Lead Layouts.



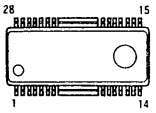
• **Semiconductor Location**

Ref. No.	Location
D814	B-5
D815	C-3
D816	B-5
D820	G-14
IC801	I-14
IC802	H-7
IC803	J-10
IC804	H-16
IC805	H-3
Q800	I-3
Q801	I-4
Q802	I-4
Q803	I-9
Q804	I-9
Q806	I-9

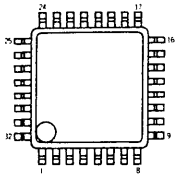
Note:
• ○—— : parts extracted from the component side.
• △ : internal component.
• ▭▭ : Pattern from the side which enable seeing.

6-7. SEMICONDUCTOR LEAD LAYOUTS

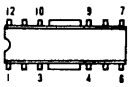
BA6297AFP



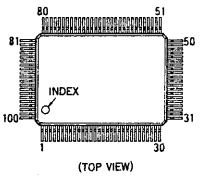
CXA1081Q



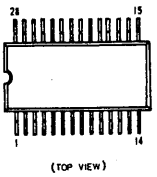
CXA1291P



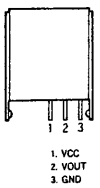
CXD2515Q



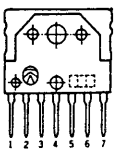
CXD2565M-1
LH5160TF



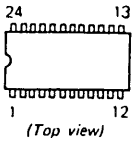
GP1F32T
SBX1610-59



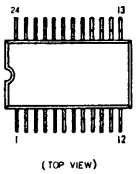
LA5602



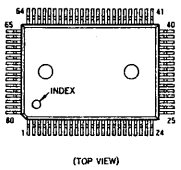
LA9215-ST



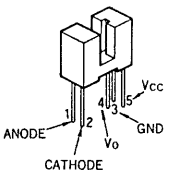
M66004M5SP



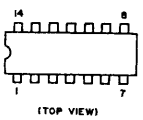
M37451M4-453FP
MB89647PF-111



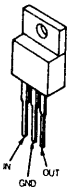
RPI-1391



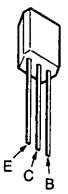
SN74HC00AN



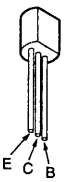
TA7808S



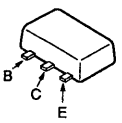
DTA114ES
DTC114ES
DTC144ES
2SC2603-EF



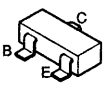
2SA1371



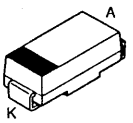
2SB1122-S



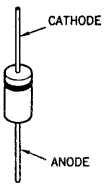
2SC3396



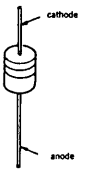
EC10DS2



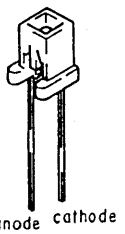
RD36ES-T2B2
1N4148M



RD8.2ES-B2
11ES2



SEL2210S-TH10
SEL2510C-TH10
SEL2810A-TH10

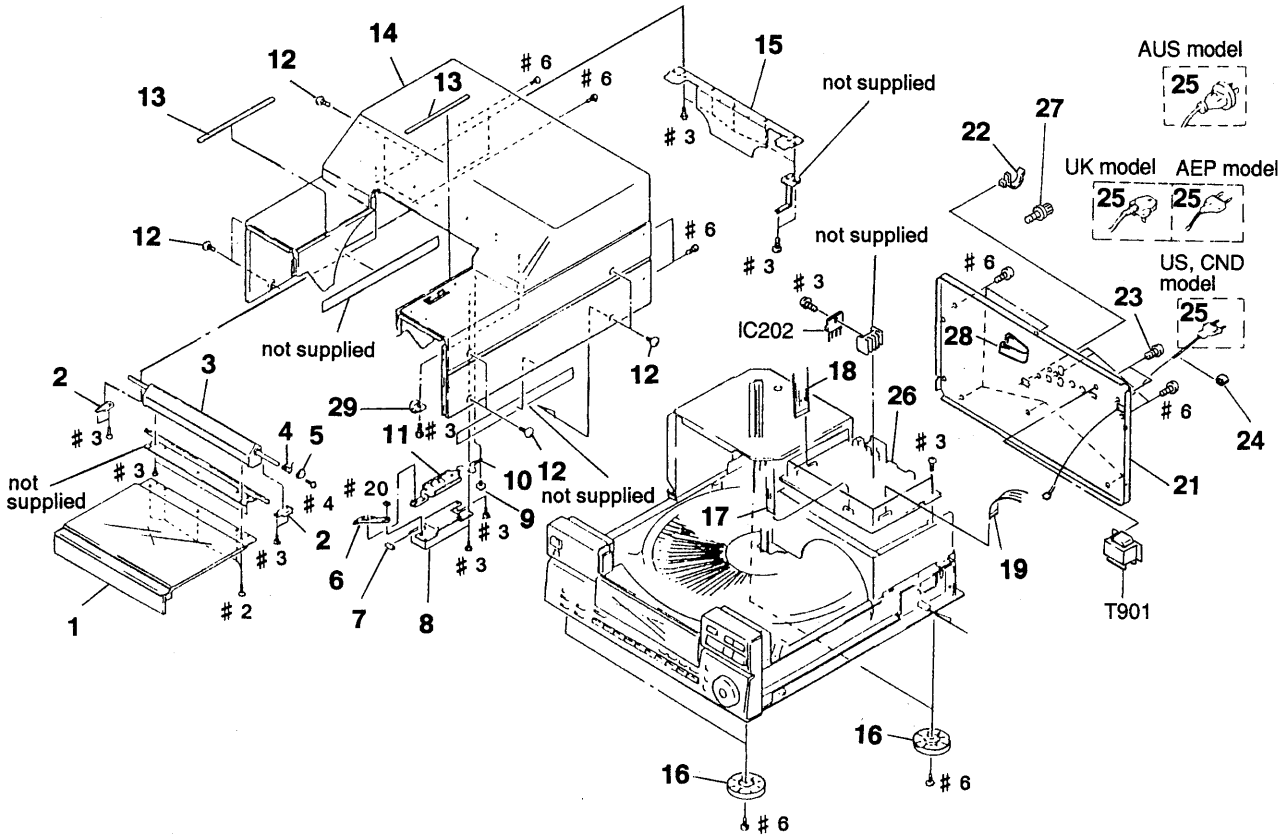


SECTION 7
EXPLODED VIEWS

NOTE:
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Abbreviation
  CND : Canadian model
  AUS : Australian model
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of this parts list.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

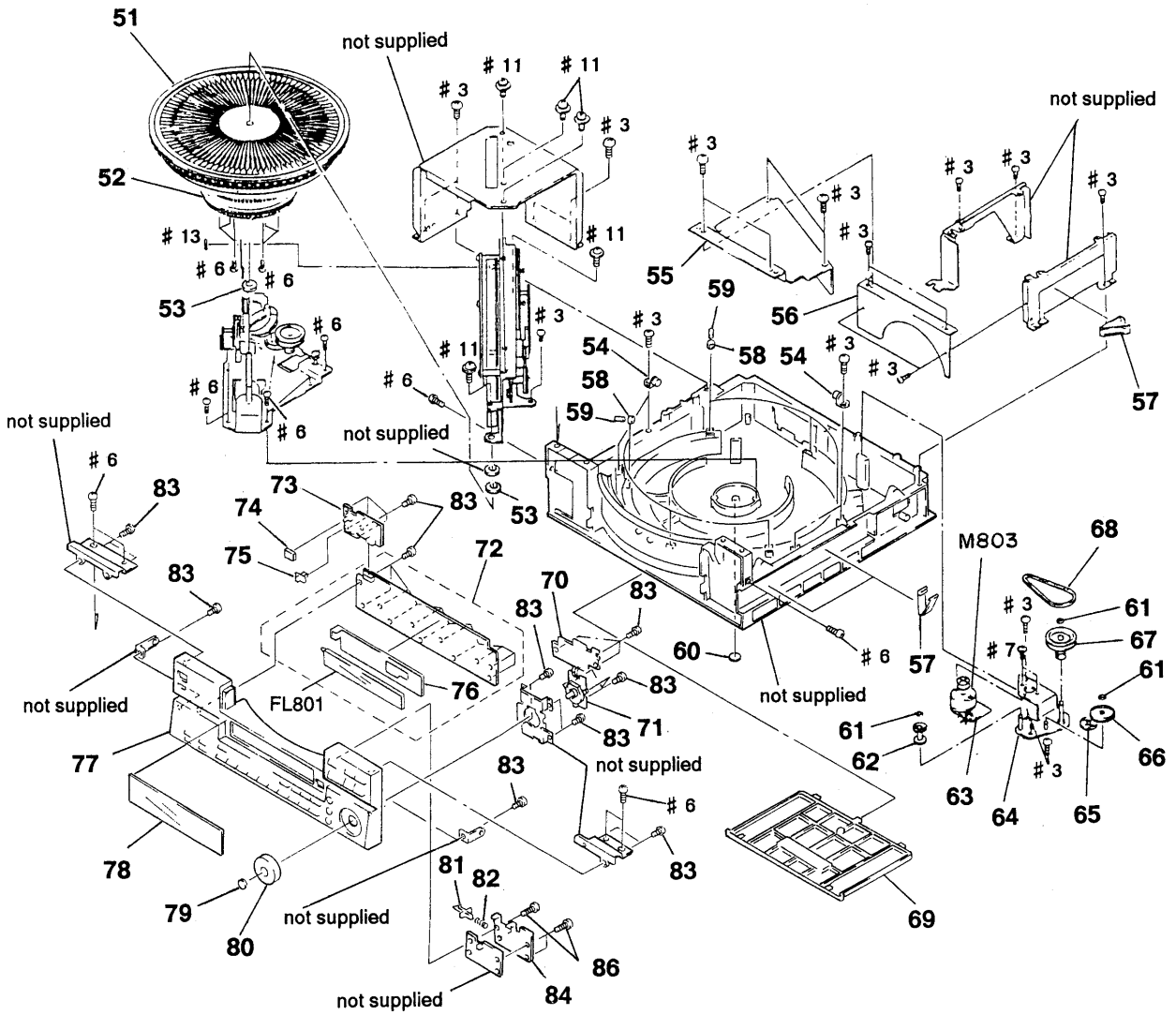
7-1. CASE, MAIN BOARD SECTION



Ref. No.	Part No.	Description	Remark
1	X-4945-136-1	COVER ASSY	
* 2	4-962-191-01	BRACKET (SHAFT)	
3	4-960-582-01	SHAFT (COVER)	
* 4	4-967-992-01	SPRING (R), TORSION	
5	4-960-588-01	GEAR (DAMPER)	
6	4-960-537-01	LEVER (LOCK)	
7	4-962-285-01	CUSHION (LOCK)	
* 8	X-4943-938-1	BRACKET (KNOB) ASSY	
9	4-933-134-01	SCREW (+PTPWH M2.6X6)	
10	4-960-542-01	SPRING, TENSION	
11	4-960-538-01	KNOB (LOCK)	
12	3-363-099-41	SCREW (CASE 3 TP2)	
13	4-962-284-01	CUSHION (E)	
14	4-960-522-11	CASE	
15	4-960-938-01	BRACKET (CASE)	
16	4-943-148-32	FOOT (F58175SW) (US, CND)	
16	4-943-148-42	FOOT (F58175SW) (AEP, UK, AUS)	
17	1-751-482-11	WIRE (FLAT TYPE) (10 CORE)	
18	1-751-478-11	WIRE (FLAT TYPE) (23 CORE)	
19	1-765-600-11	WIRE (FLAT TYPE) (19 CORE)	

Ref. No.	Part No.	Description	Remark
* 21	4-967-994-01	PANEL, BACK (US, CND)	
* 21	4-967-994-11	PANEL, BACK (AEP)	
* 21	4-967-994-21	PANEL, BACK (UK)	
* 21	4-967-994-31	PANEL, BACK (AUS)	
* 22	4-949-235-01	HOOK (US, CND, AEP, UK)	
23	4-847-802-00	SCREW, CASE STOPPER	
* 24	3-703-244-00	BUSHING (2104), CORD	
⚠25	1-558-568-21	CORD, POWER (AEP)	
⚠25	1-590-836-11	CORD, POWER (US, CND)	
⚠25	1-696-571-11	CORD, POWER (UK)	
⚠25	1-696-845-11	CORD, POWER (AUS)	
* 26	A-4673-190-A	MAIN BOARD, COMPLETE (AEP, UK, AUS)	
* 26	A-4673-217-A	MAIN BOARD, COMPLETE (US, CND)	
27	4-947-010-01	SCREW, FEEDER FIXED	
* 28	4-966-273-01	CLAMP, FLAT CABLE	
29	4-919-393-41	DAMPER	
IC202	8-759-061-65	IC LA5602	
⚠T901	1-426-956-11	TRANSFORMER, POWER (AEP, UK, AUS)	
⚠T901	1-426-957-11	TRANSFORMER, POWER (US, CND)	

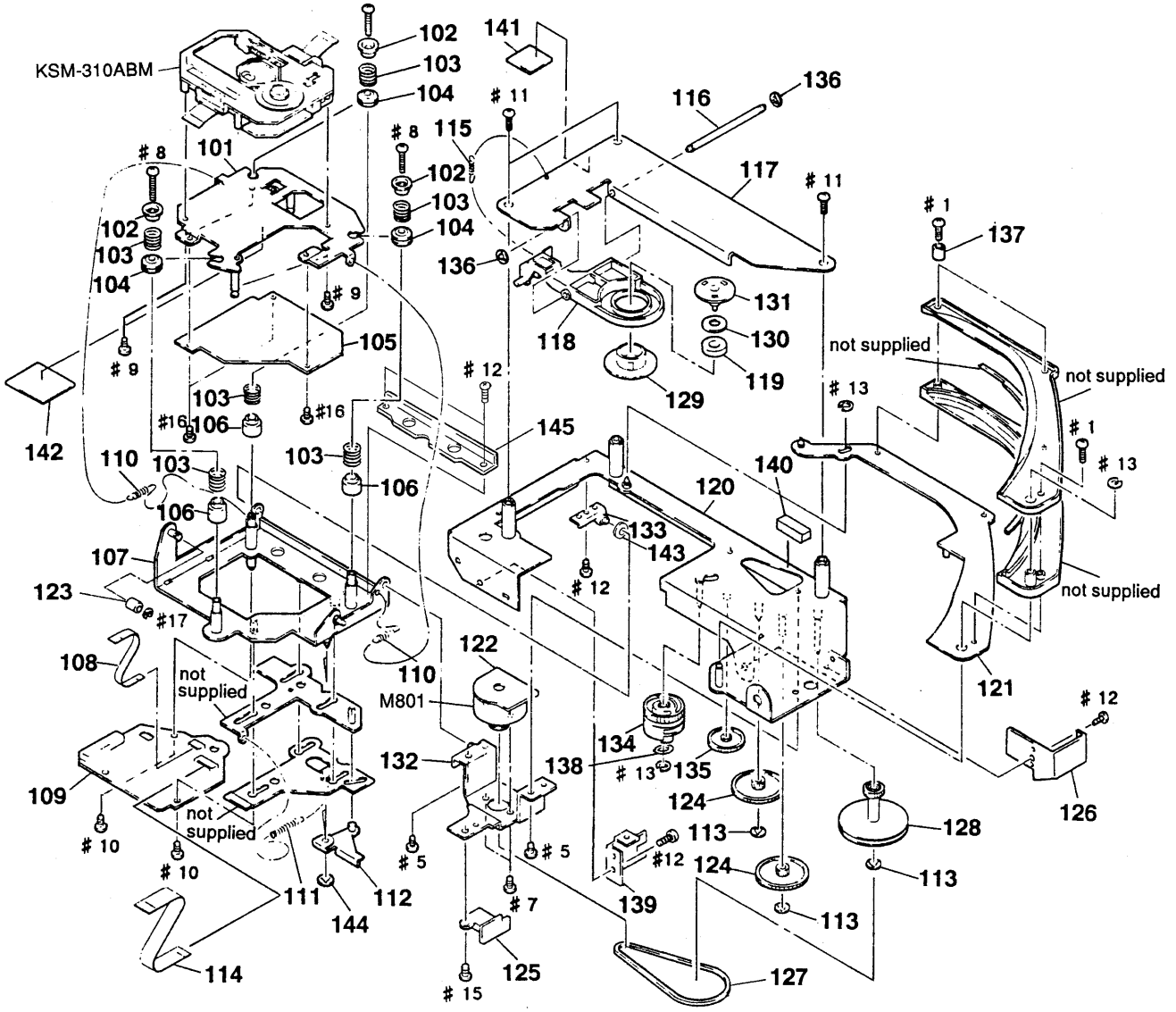
7-2. TABLE (ROTARY) SECTION



Ref. No.	Part No.	Description	Remark
51	4-960-666-01	TABLE (ROTARY)	
52	4-960-667-01	SENSOR (ROTARY)	
53	3-701-446-21	WASHER, 8	
54	X-4944-217-1	SHAFT (HOLD) ASSY	
* 55	4-962-287-01	COVER (TRANSFORMER)	
* 56	4-960-520-01	BRACKET (C)	
* 57	4-966-273-01	CLAMP, FLAT CABLE	
58	X-4924-457-1	ROLLER ASSY	
59	4-934-376-01	SHAFT (ROLLER)	
60	4-963-598-01	CUSHION (FOOT)	
61	3-325-697-01	WASHER	
62	4-960-668-01	GEAR (D)	
* 63	1-649-110-11	TABLE MOTOR BOARD	
* 64	X-4943-954-1	BASE (ROTARY) ASSY	
65	4-960-622-01	GEAR (B)	
66	4-960-621-01	GEAR (A)	
67	X-4944-234-1	GEAR (PULLEY) ASSY	
68	4-962-822-01	BELT (TIMING)	
* 69	4-960-550-01	COVER (DUST)	
* 70	1-653-579-11	FUNCTION BOARD	

Ref. No.	Part No.	Description	Remark
* 71	1-653-582-11	JOG BOARD	
* 72	A-4673-214-A	DISPLAY BOARD, COMPLETE	
* 73	1-653-580-11	POWER SW BOARD	
74	4-922-921-01	BUTTON (POWER)	
75	4-943-114-11	BUTTON (TIMER)	
76	4-960-501-03	HOLDER (FL TUBE)	
77	X-4945-134-1	PANEL ASSY, FRONT (US, CND, UK, AUS)	
77	X-4945-135-1	PANEL ASSY, FRONT (AEP)	
78	4-967-987-01	PLATE, INDICATION	
79	4-960-509-01	BUTTON (ENTER)	
80	4-960-510-01	KNOB (JOG)	
81	4-960-525-01	LOCK	
82	4-960-535-01	SPRING, COMPRESSION	
83	4-951-620-01	SCREW (2.6X8), +BVTP	
* 84	4-960-534-01	BRACKET (LOCK)	
86	4-951-620-21	SCREW (2.6X14), +BVTP	
FL801	1-517-332-11	INDICATOR TUBE, FLUORESCENT	
M803	A-4604-834-A	MOTOR ASSY, TABLE	

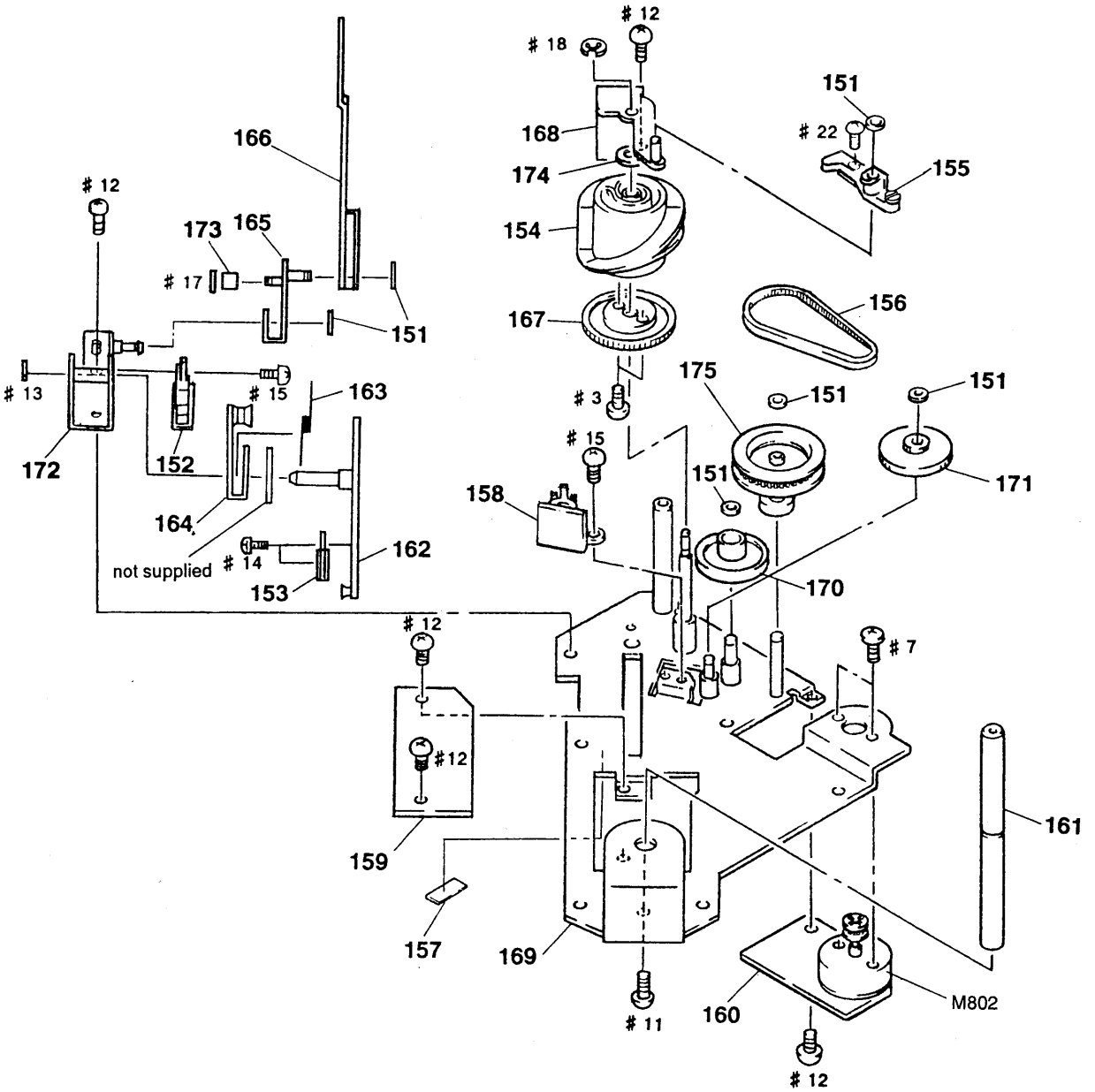
7-3. CD MECHANISM SECTION (1) (CDM-30)



Ref. No.	Part No.	Description	Remark
* 101	X-4943-942-1	BASE (BU) ASSY	
102	4-960-617-01	CAP (F)	
103	4-960-618-01	SPRING (F), COMPRESSION	
104	4-960-615-01	DAMPER (F)	
* 105	A-4649-728-A	RF BOARD, COMPLETE	
106	4-960-616-01	COLLAR (F)	
* 107	X-4943-941-1	PLATE (BU) ASSY, FULCRUM	
108	1-751-481-11	WIRE (FLAT TYPE) (8 CORE)	
* 109	A-4649-727-A	BD BOARD, COMPLETE	
110	4-960-619-01	SPRING (F), TENSION	
111	4-960-626-01	SPRING (F LOCK), TENSION	
* 112	X-4943-943-1	LEVER (F LOCK) ASSY	
113	3-696-510-01	WASHER (3), STOPPER	
114	1-751-479-11	WIRE (FLAT TYPE) (12 CORE)	
115	4-960-635-01	SPRING (C), TENSION	
116	4-960-634-01	SHAFT (Q)	
* 117	4-960-637-01	BASE (CHUCKING)	
118	4-960-630-01	ARM, CHUCKING	
119	3-366-559-11	MAGNET (CHUCK)	
* 120	X-4943-940-1	BASE (MD) ASSY	
121	X-4943-946-1	GUIDE (A) ASSY	
* 122	1-649-108-11	CHUCKING MOTOR BOARD	
123	4-963-590-02	ROLLER (FULCRUM PLATE BU)	
124	4-960-621-01	GEAR (A)	

Ref. No.	Part No.	Description	Remark
* 125	1-649-112-11	CHUCKING SW BOARD	
126	4-962-829-02	COVER (G.P)	
127	4-962-822-01	BELT (TIMING)	
128	X-4944-234-1	GEAR (PULLEY) ASSY	
129	4-960-631-01	PULLEY (A)	
130	4-960-633-01	YOKE (MAGNET)	
131	4-960-632-01	PULLEY (B)	
* 132	X-4943-944-1	PLATE (R) ASSY, FULCRUM	
* 133	X-4943-945-1	PLATE (L) ASSY, FULCRUM	
134	4-960-623-01	CAM (CHUCKING)	
135	4-960-622-01	GEAR (B)	
136	3-669-596-01	WASHER (2.3), STOPPER	
137	4-885-848-01	SPACER	
138	3-701-441-01	WASHER	
139	4-962-825-01	LIMITER (BU)	
140	3-831-441-XX	CUSHION	
141	9-911-863-XX	INSULATOR	
142	4-970-016-01	DAMPER (KSM)	
143	3-701-441-11	WASHER	
144	3-325-697-01	WASHER	
145	4-962-826-01	LIMITER (FULCRUM BU)	
M801	A-4604-834-A	MOTOR ASSY, CHUCKING	

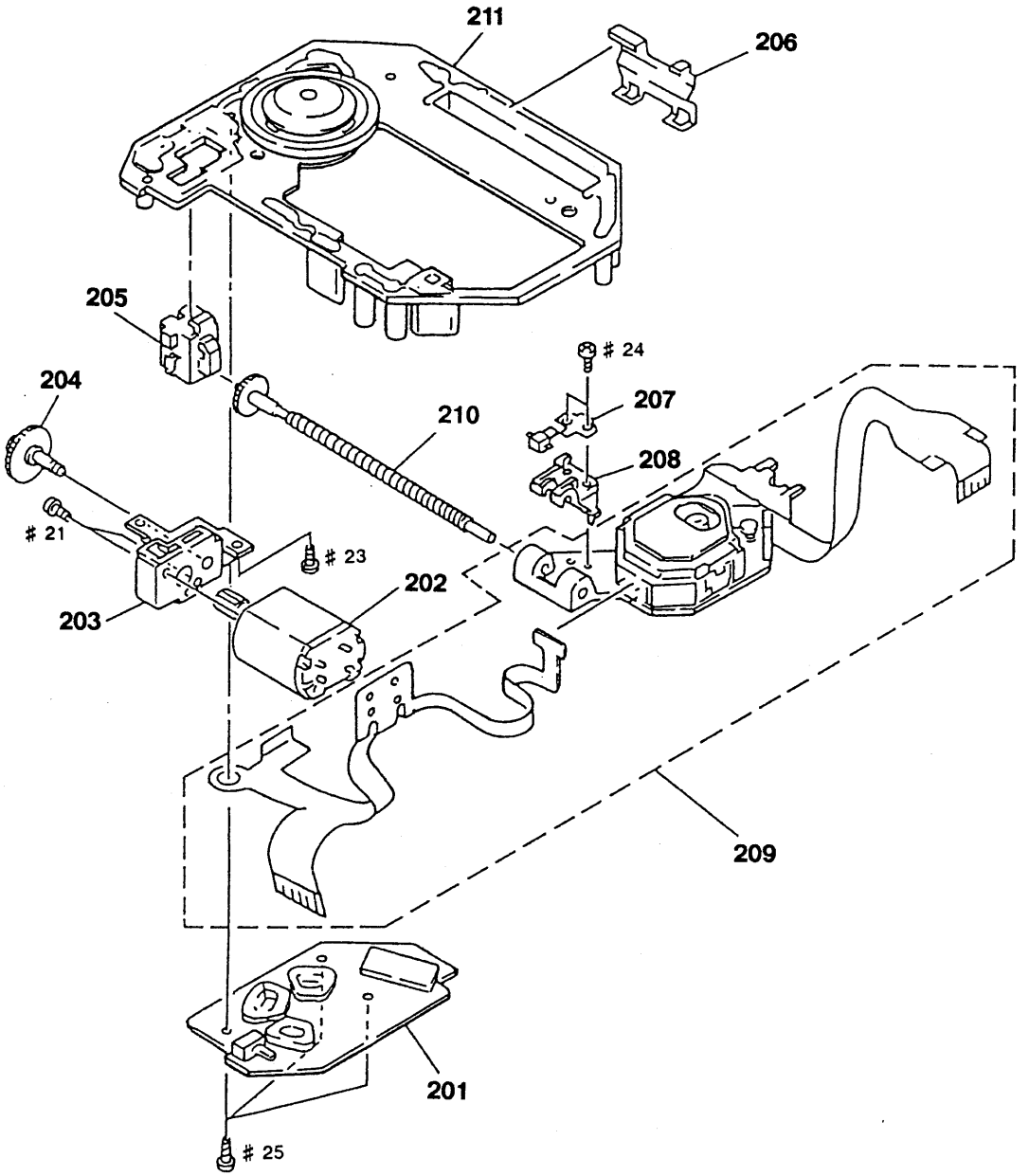
7-4. CD MECHANISM SECTION (2) (CDM-30)



Ref.No.	Part No.	Description	Remark
151	3-696-510-01	WASHER (3), STOPPER	
* 152	1-649-111-11	DISK SW BOARD	
* 153	4-960-663-01	GUIDE (DISK)	
154	4-960-660-01	CAM (LOADING)	
155	X-4944-380-1	HOLDER (T LOCK) ASSY	
156	4-962-822-01	BELT (TIMING)	
157	3-831-441-XX	CUSHION	
* 158	1-649-113-11	LOADING SW BOARD	
* 159	1-649-107-11	SENSOR BOARD	
* 160	1-649-109-11	LOADING MOTOR BOARD	
* 161	4-960-665-01	SHAFT (CENTER)	
* 162	X-4943-949-1	LEVER (R) ASSY	
163	4-962-522-01	SPRING (TOGGLE)	
* 164	X-4943-951-1	LEVER (L) ASSY	

Ref.No.	Part No.	Description	Remark
* 165	X-4943-952-1	LEVER (G) ASSY	
* 166	4-960-662-01	LEVER (LINK)	
167	4-962-523-01	GEAR (E)	
168	X-4943-947-1	HOLDER (CAM) ASSY	
* 169	X-4943-953-1	BASE (LOADING) ASSY	
170	4-960-659-01	GEAR (C)	
171	4-960-621-01	GEAR (A)	
* 172	X-4943-948-1	HOLDER (LEVER) ASSY	
173	4-963-014-01	ROLLER (LEVER G)	
174	3-701-444-01	WASHER, 6	
175	X-4944-234-1	GEAR (PULLEY) ASSY	
M802	A-4604-834-A	MOTOR ASSY, LOADING	

7-5. BASE UNIT SECTION (KSM-310 ABM)



The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une piéce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark
201	8-835-456-01	MOTOR, DC SSC-02E01S	
202	X-2625-210-1	GEAR ASSY, SLED MOTOR	
* 203	2-625-513-01	BASE, DRIVING	
204	2-625-507-01	GEAR (B2)	
* 205	A-4910-348-B	RETAINER ASSY, THRUST	
* 206	2-625-514-01	COVER, FLEXIBLE	
207	2-625-516-01	SPRING (A), FEED	
208	2-625-515-01	RACK (AT)	
⚠209	8-848-178-11	OPTICAL PICK-UP BLOCK KSS-310A	
210	X-2625-209-1	SCREW ASSY, SLED	
211	X-2625-641-1	OMD CHASSIS ASSY	

SECTION 8
ELECTRICAL PARTS LIST

CHUCKING MOTOR

NOTE:

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une piéce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Hardware (# mark) list and accessories and packing materials are given in the last of this parts list.
- Abbreviation
  CND : Canadian model

- RESISTORS
  All resistors are in ohms
  METAL: Metal-film resistor
  METAL OXIDE: Metal Oxide-film resistor
  F : nonflammable
- SEMICONDUCTORS
  In each case, u: μ , for example:
  uA...: μA..., uPA...: μPA..., uPB...: μPB..., uPC...: μPC..., uPD...: μPD...
- CAPACITORS
  uF : μF
- COILS
  uH : μH

Ref.No.	Part No.	Description			Remark
*	A-4649-727-A	BD BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C101	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C102	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C103	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C105	1-135-155-21	TANTALUM CHIP	4.7uF	10%	16V
C106	1-164-346-11	CERAMIC CHIP	1uF		16V
C107	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C108	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C109	1-163-011-11	CERAMIC CHIP	0.0015uF	10%	50V
C110	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C111	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C112	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C113	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C123	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C124	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C151	1-163-007-11	CERAMIC CHIP	680PF	10%	50V
C152	1-163-007-11	CERAMIC CHIP	680PF	10%	50V
C153	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C154	1-164-336-11	CERAMIC CHIP	0.33uF		25V
C155	1-163-007-11	CERAMIC CHIP	680PF	10%	50V
C156	1-163-007-11	CERAMIC CHIP	680PF	10%	50V
C157	1-163-033-00	CERAMIC CHIP	0.022uF		50V
C158	1-163-033-00	CERAMIC CHIP	0.022uF		50V
C161	1-163-038-00	CERAMIC CHIP	0.1uF		25V
		< CONNECTOR >			
* CN101	1-568-865-11	SOCKET, CONNECTOR 23P			
CN102	1-568-794-11	SOCKET, CONNECTOR 12P			
* CN103	1-580-469-11	SOCKET, CONNECTOR 8P			
		< IC >			
IC101	8-752-361-90	IC CXD2515Q			
IC101	8-752-351-94	IC CXD2515Q			
IC102	8-759-071-79	IC BA6297AFP			
		< RESISTOR >			
R101	1-216-077-00	METAL CHIP	15K	5% 1/10W	
R102	1-216-097-00	METAL CHIP	100K	5% 1/10W	
R103	1-216-077-00	METAL CHIP	15K	5% 1/10W	
R104	1-216-085-00	METAL CHIP	33K	5% 1/10W	
R105	1-216-097-00	METAL CHIP	100K	5% 1/10W	
R106	1-216-061-00	METAL CHIP	3.3K	5% 1/10W	
R107	1-216-061-00	METAL CHIP	3.3K	5% 1/10W	
R108	1-216-073-00	METAL CHIP	10K	5% 1/10W	
R109	1-216-121-00	METAL CHIP	1M	5% 1/10W	
R110	1-216-025-00	METAL CHIP	100	5% 1/10W	
R112	1-216-049-00	METAL CHIP	1K	5% 1/10W	
R113	1-216-077-00	METAL CHIP	15K	5% 1/10W	
R114	1-216-077-00	METAL CHIP	15K	5% 1/10W	
R117	1-216-077-00	METAL CHIP	15K	5% 1/10W	
R118	1-216-077-00	METAL CHIP	15K	5% 1/10W	
R121	1-216-077-00	METAL CHIP	15K	5% 1/10W	
R122	1-216-077-00	METAL CHIP	15K	5% 1/10W	
R123	1-216-073-00	METAL CHIP	10K	5% 1/10W	
R124	1-216-097-00	METAL CHIP	100K	5% 1/10W	
R125	1-216-049-00	METAL CHIP	1K	5% 1/10W	
R126	1-216-049-00	METAL CHIP	1K	5% 1/10W	
R127	1-216-049-00	METAL CHIP	1K	5% 1/10W	
R131	1-216-295-91	METAL GLAZE	0	5% 1/10W	
R151	1-216-070-00	METAL CHIP	7.5K	5% 1/10W	
R152	1-216-070-00	METAL CHIP	7.5K	5% 1/10W	
R153	1-216-070-00	METAL CHIP	7.5K	5% 1/10W	
R154	1-216-070-00	METAL CHIP	7.5K	5% 1/10W	
R155	1-216-070-00	METAL CHIP	7.5K	5% 1/10W	
R156	1-216-070-00	METAL CHIP	7.5K	5% 1/10W	
R161	1-216-308-00	METAL CHIP	4.7	5% 1/10W	
**********					
*	1-649-108-11	CHUCKING MOTOR BOARD			
		**********			
		< CAPACITOR >			
C850	1-162-302-11	CERAMIC	0.0022uF	20% 16V	
		< MOTOR >			
M801	A-4604-834-A	MOTOR ASSY, CHUCKING			
**********					

CHUCKING SW | DISK SW | DISPLAY

Ref. No.	Part No.	Description			Remark
*	1-649-112-11	CHUCKING SW BOARD			
		**********			
		< SWITCH >			
S844	1-571-300-21	SWITCH, ROTARY (CHUCKING UP/DOWN DET)			
**********					
*	1-649-111-11	DISK SW BOARD			
		**********			
		< SWITCH >			
S842	1-571-300-21	SWITCH, ROTARY (DISC DET)			
**********					
*	A-4673-214-A	DISPLAY BOARD, COMPLETE			
		**********			
	4-960-501-01	HOLDER (FL TUBE)			
		< CAPACITOR >			
C801	1-161-494-00	CERAMIC	0.022uF		25V
C802	1-125-486-11	DOUBLE LAYERS	0.22F		5.5V
C803	1-136-165-00	FILM	0.1uF	5%	50V
C804	1-126-177-11	ELECT	100uF	20%	6.3V
C805	1-162-306-11	CERAMIC	0.01uF	20%	16V
C806	1-162-306-11	CERAMIC	0.01uF	20%	16V
C807	1-162-306-11	CERAMIC	0.01uF	20%	16V
C810	1-162-294-31	CERAMIC	0.001uF	10%	50V
C811	1-162-294-31	CERAMIC	0.001uF	10%	50V
C812	1-162-294-31	CERAMIC	0.001uF	10%	50V
C814	1-124-584-00	ELECT	100uF	20%	10V
C815	1-162-282-31	CERAMIC	100PF	10%	50V
C817	1-164-159-11	CERAMIC	0.1uF		50V
C818	1-164-159-11	CERAMIC	0.1uF		50V
C819	1-162-294-31	CERAMIC	0.001uF	10%	50V
C820	1-136-165-00	FILM	0.1uF	5%	50V
C821	1-164-159-11	CERAMIC	0.1uF		50V
C822	1-162-294-31	CERAMIC	0.001uF	10%	50V
C823	1-162-294-31	CERAMIC	0.001uF	10%	50V
C824	1-162-294-31	CERAMIC	0.001uF	10%	50V
C825	1-162-282-31	CERAMIC	100PF	10%	50V
		< CONNECTOR >			
CN801	1-568-669-11	CONNECTOR, BOARD TO BOARD 8P			
* CN802	1-569-799-11	PLUG, CONNECTOR 5P			
* CN803	1-568-862-11	SOCKET, CONNECTOR 19P			
		< DIODE >			
D820	8-719-987-63	DIODE 1N4148M			

Ref. No.	Part No.	Description			Remark
		< FLUORESCENT INDICATOR >			
FL801	1-517-332-11	INDICATOR TUBE, FLUORESCENT			
		< IC >			
IC801	8-759-288-41	IC MB89647PF-111			
IC802	8-759-183-27	IC M66004M5SP			
IC803	8-759-916-12	IC SN74HC00AN			
IC804	8-759-289-94	IC LH5160TF			
IC805	8-741-100-48	IC SBX1610-59			
		< COIL >			
L880	1-412-473-21	INDUCTOR	0uH		
		< TRANSISTOR >			
Q800	8-729-900-80	TRANSISTOR	DTC114ES		
Q801	8-729-900-80	TRANSISTOR	DTC114ES		
Q802	8-729-900-80	TRANSISTOR	DTC114ES		
Q803	8-729-900-80	TRANSISTOR	DTC114ES		
Q804	8-729-900-80	TRANSISTOR	DTC114ES		
Q806	8-729-900-61	TRANSISTOR	DTA114ES		
		< RESISTOR >			
R830	1-249-429-11	CARBON	10K	5% 1/4W	
R831	1-249-417-11	CARBON	1K	5% 1/4W	F
R832	1-249-419-11	CARBON	1.5K	5% 1/4W	F
R833	1-249-420-11	CARBON	1.8K	5% 1/4W	F
R834	1-249-422-11	CARBON	2.7K	5% 1/4W	F
R835	1-249-423-11	CARBON	3.3K	5% 1/4W	F
R836	1-249-425-11	CARBON	4.7K	5% 1/4W	F
R837	1-249-428-11	CARBON	8.2K	5% 1/4W	F
R838	1-249-431-11	CARBON	15K	5% 1/4W	
R839	1-249-437-11	CARBON	47K	5% 1/4W	
R840	1-249-429-11	CARBON	10K	5% 1/4W	
R841	1-249-417-11	CARBON	1K	5% 1/4W	F
R842	1-249-419-11	CARBON	1.5K	5% 1/4W	F
R843	1-249-420-11	CARBON	1.8K	5% 1/4W	F
R844	1-249-422-11	CARBON	2.7K	5% 1/4W	F
R845	1-249-423-11	CARBON	3.3K	5% 1/4W	F
R846	1-249-425-11	CARBON	4.7K	5% 1/4W	F
R847	1-249-428-11	CARBON	8.2K	5% 1/4W	F
R848	1-249-431-11	CARBON	15K	5% 1/4W	
R849	1-249-437-11	CARBON	47K	5% 1/4W	
R850	1-249-429-11	CARBON	10K	5% 1/4W	
R851	1-249-417-11	CARBON	1K	5% 1/4W	F
R852	1-249-419-11	CARBON	1.5K	5% 1/4W	F
R853	1-249-429-11	CARBON	10K	5% 1/4W	
R854	1-249-429-11	CARBON	10K	5% 1/4W	
R856	1-249-429-11	CARBON	10K	5% 1/4W	
R860	1-249-429-11	CARBON	10K	5% 1/4W	

DISPLAY | FUNCTION | JOG | LOADING MOTOR

Ref. No.	Part No.	Description				Remark
R861	1-249-429-11	CARBON	10K	5%	1/4W	
R862	1-249-429-11	CARBON	10K	5%	1/4W	
R863	1-249-434-11	CARBON	27K	5%	1/4W	
R864	1-247-864-11	CARBON	24K	5%	1/4W	
R867	1-249-417-11	CARBON	1K	5%	1/4W	F
R870	1-249-429-11	CARBON	10K	5%	1/4W	
R871	1-249-429-11	CARBON	10K	5%	1/4W	
R872	1-249-429-11	CARBON	10K	5%	1/4W	
R873	1-249-429-11	CARBON	10K	5%	1/4W	
R874	1-249-429-11	CARBON	10K	5%	1/4W	
R878	1-249-429-11	CARBON	10K	5%	1/4W	
R879	1-249-429-11	CARBON	10K	5%	1/4W	
R880	1-249-429-11	CARBON	10K	5%	1/4W	
R881	1-249-429-11	CARBON	10K	5%	1/4W	
R882	1-249-429-11	CARBON	10K	5%	1/4W	
R883	1-249-429-11	CARBON	10K	5%	1/4W	
R884	1-249-429-11	CARBON	10K	5%	1/4W	
R885	1-249-399-11	CARBON	33	5%	1/4W	F
R886	1-249-429-11	CARBON	10K	5%	1/4W	
R889	1-249-429-11	CARBON	10K	5%	1/4W	
R890	1-249-417-11	CARBON	1K	5%	1/4W	F
		< SWITCH >				
S800	1-554-303-21	SWITCH, TACTILE (GROUP 1)				
S801	1-554-303-21	SWITCH, TACTILE (GROUP 2)				
S802	1-554-303-21	SWITCH, TACTILE (GROUP 3)				
S803	1-554-303-21	SWITCH, TACTILE (GROUP 4)				
S804	1-554-303-21	SWITCH, TACTILE (GROUP 5)				
S805	1-554-303-21	SWITCH, TACTILE (GROUP 6)				
S806	1-554-303-21	SWITCH, TACTILE (GROUP 7)				
S807	1-554-303-21	SWITCH, TACTILE (GROUP 8)				
S808	1-554-303-21	SWITCH, TACTILE (GROUP 9)				
S809	1-554-303-21	SWITCH, TACTILE (GROUP 10)				
S810	1-554-303-21	SWITCH, TACTILE (GROUP ENTRY)				
S811	1-554-303-21	SWITCH, TACTILE (REPEAT)				
S812	1-554-303-21	SWITCH, TACTILE (CONTINUE)				
S813	1-554-303-21	SWITCH, TACTILE (SHUFFLE)				
S814	1-554-303-21	SWITCH, TACTILE (PROGRAM)				
S815	1-554-303-21	SWITCH, TACTILE (MEMO CLEAR)				
S816	1-554-303-21	SWITCH, TACTILE (MEMO DISC/GRP.)				
S817	1-554-303-21	SWITCH, TACTILE (MEMO CHECK)				
S818	1-554-303-21	SWITCH, TACTILE (MEMO SCAN)				
S819	1-554-303-21	SWITCH, TACTILE (TIME)				
S820	1-554-303-21	SWITCH, TACTILE (ERASE)				
S821	1-554-303-21	SWITCH, TACTILE (FILE)				
S822	1-554-303-21	SWITCH, TACTILE (MEMO INPUT)				
		< VIBRATOR >				
X800	1-579-175-11	VIBRATOR, CERAMIC				

Ref. No.	Part No.	Description				Remark
**********						
*	1-653-579-11	FUNCTION BOARD				
		**********				
		< CONNECTOR >				
CN806	1-766-739-11	CONNECTOR, BOARD TO BOARD 12P				
		< DIODE >				
D814	8-719-303-02	DIODE SEL2510C-D				
D815	8-719-301-49	DIODE SEL2810A				
D816	8-719-313-43	DIODE SEL2210S-TH10				
		< TRANSISTOR >				
Q805	8-729-900-80	TRANSISTOR DTC114ES				
		< RESISTOR >				
R822	1-249-406-11	CARBON	120	5%	1/4W	F
R823	1-249-406-11	CARBON	120	5%	1/4W	F
R824	1-249-411-11	CARBON	330	5%	1/4W	
R853	1-249-420-11	CARBON	1.8K	5%	1/4W	F
R854	1-249-422-11	CARBON	2.7K	5%	1/4W	F
R855	1-249-423-11	CARBON	3.3K	5%	1/4W	F
R856	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R857	1-249-428-11	CARBON	8.2K	5%	1/4W	F
R858	1-249-431-11	CARBON	15K	5%	1/4W	
R859	1-249-437-11	CARBON	47K	5%	1/4W	
		< SWITCH >				
S823	1-554-303-21	SWITCH, TACTILE (▷)				
S824	1-554-303-21	SWITCH, TACTILE (▮▮)				
S825	1-554-303-21	SWITCH, TACTILE (■)				
S826	1-554-303-21	SWITCH, TACTILE (▷▷|)				
S827	1-554-303-21	SWITCH, TACTILE (|◁◁)				
S828	1-554-303-21	SWITCH, TACTILE (UNLOAD)				
**********						
*	1-653-582-11	JOG BOARD				
		*********				
		< SWITCH >				
RE800	1-692-615-11	SWITCH, JOG (SELECT/ENTER)				
**********						
*	1-649-109-11	LOADING MOTOR BOARD				
		**********				
		< CAPACITOR >				
C851	1-162-302-11	CERAMIC	0.0022uF	20%	16V	

LOADING MOTOR | LOADING SW | MAIN

Ref.No.	Part No.	Description			Remark
		< CONNECTOR >			
* CN891	1-568-941-11	PIN, CONNECTOR 3P			
CN892	1-506-481-11	PIN, CONNECTOR 2P			
* CN893	1-568-943-11	PIN, CONNECTOR 5P			
* CN895	1-568-829-11	SOCKET, CONNECTOR 10P			
		< MOTOR >			
M802	A-4604-834-A	MOTOR ASSY, LOADING			
**********					
*	1-649-113-11	LOADING SW BOARD			
		**********			
		< SWITCH >			
S843	1-571-300-21	SWITCH, ROTARY (LOADING DET)			
**********					
*	A-4673-190-A	MAIN BOARD, COMPLETE (AEP, UK, AUS)			
		**********			
*	A-4673-217-A	MAIN BOARD, COMPLETE (US, CND)			
		**********			
	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S			
		< CAPACITOR >			
C1	1-162-282-31	CERAMIC	100PF	10%	50V
C2	1-162-215-31	CERAMIC	47PF	5%	50V
C3	1-162-215-31	CERAMIC	47PF	5%	50V
C4	1-124-994-11	ELECT	100uF	20%	10V
C5	1-106-359-00	MYLAR	4700PF	5%	200V
C6	1-130-472-00	MYLAR	0.0012uF	5%	50V
C7	1-124-994-11	ELECT	100uF	20%	10V
C8	1-130-467-00	MYLAR	470PF	5%	50V
C201	1-124-572-11	ELECT	100uF	20%	63V
C202	1-126-163-11	ELECT	4.7uF	20%	50V
C203	1-124-360-00	ELECT	1000uF	20%	16V
C204	1-126-017-11	ELECT	6800uF	20%	16V
C205	1-126-012-11	ELECT	470uF	20%	16V
C206	1-126-163-11	ELECT	4.7uF	20%	50V
C207	1-126-163-11	ELECT	4.7uF	20%	50V
C208	1-126-022-11	ELECT	47uF	20%	16V
C210	1-126-101-11	ELECT	100uF	20%	16V
C308	1-164-159-11	CERAMIC	0.1uF		50V
C309	1-126-022-11	ELECT	47uF	20%	16V
C310	1-164-159-11	CERAMIC	0.1uF		50V
C311	1-164-159-11	CERAMIC	0.1uF		50V
C320	1-162-196-31	CERAMIC	5.6PF	10%	50V
C321	1-162-196-31	CERAMIC	5.6PF	10%	50V
C322	1-161-494-00	CERAMIC	0.022uF		25V

Ref.No.	Part No.	Description			Remark
C323	1-126-022-11	ELECT	47uF	20%	16V
C324	1-126-025-11	ELECT	330uF	20%	16V
C325	1-126-025-11	ELECT	330uF	20%	16V
C326	1-126-022-11	ELECT	47uF	20%	16V
C327	1-126-022-11	ELECT	47uF	20%	16V
C328	1-126-049-11	ELECT	22uF	20%	25V
C329	1-124-994-11	ELECT	100uF	20%	10V
C330	1-124-994-11	ELECT	100uF	20%	10V
C331	1-136-165-00	FILM	0.1uF	5%	50V
C332	1-164-159-11	CERAMIC	0.1uF		50V
C333	1-164-159-11	CERAMIC	0.1uF		50V
C334	1-136-165-00	FILM	0.1uF	5%	50V
C335	1-162-294-31	CERAMIC	0.001uF	10%	50V
C336	1-164-159-11	CERAMIC	0.1uF		50V
C338	1-164-159-11	CERAMIC	0.1uF		50V
C339	1-126-022-11	ELECT	47uF	20%	16V
C340	1-164-159-11	CERAMIC	0.1uF		50V
C341	1-164-159-11	CERAMIC	0.1uF		50V
C342	1-162-196-31	CERAMIC	5.6PF	10%	50V
C343	1-164-159-11	CERAMIC	0.1uF		50V
C353	1-164-159-11	CERAMIC	0.1uF		50V
C354	1-136-165-00	FILM	0.1uF	5%	50V
C403	1-126-022-11	ELECT	47uF	20%	16V
C404	1-126-022-11	ELECT	47uF	20%	16V
C405	1-161-494-00	CERAMIC	0.022uF		25V
C406	1-162-306-11	CERAMIC	0.01uF	20%	16V
C407	1-164-159-11	CERAMIC	0.1uF		50V
C408	1-164-159-11	CERAMIC	0.1uF		50V
C409	1-164-159-11	CERAMIC	0.1uF		50V
C410	1-164-159-11	CERAMIC	0.1uF		50V
C411	1-136-165-00	FILM	0.1uF	5%	50V
C415	1-164-159-11	CERAMIC	0.1uF		50V
C416	1-164-159-11	CERAMIC	0.1uF		50V
C417	1-164-159-11	CERAMIC	0.1uF		50V
C701	1-162-282-31	CERAMIC	100PF	10%	50V
C702	1-162-215-31	CERAMIC	47PF	5%	50V
C703	1-162-215-31	CERAMIC	47PF	5%	50V
C704	1-124-994-11	ELECT	100uF	20%	10V
C705	1-106-359-00	MYLAR	4700PF	5%	200V
C706	1-130-472-00	MYLAR	0.0012uF	5%	50V
C707	1-124-994-11	ELECT	100uF	20%	10V
C708	1-130-467-00	MYLAR	470PF	5%	50V
C852	1-162-302-11	CERAMIC	0.0022uF	20%	16V
		< CONNECTOR >			
CN203	1-580-230-11	PIN, CONNECTOR (PC BOARD) 3P			
* CN402	1-568-829-11	SOCKET, CONNECTOR 10P			
* CN403	1-568-954-11	PIN, CONNECTOR 5P			
* CN404	1-568-951-11	PIN, CONNECTOR 2P			
* CN904	1-568-839-11	SOCKET, CONNECTOR 23P			

Ref.No.	Part No.	Description	Remark
CN905	1-568-802-11	SOCKET, CONNECTOR 19P	
		< DIODE >	
D201	8-719-200-82	DIODE 11ES2	
D202	8-719-110-08	DIODE RD8.2ES-B2	
D203	8-719-200-82	DIODE 11ES2	
D204	8-719-200-82	DIODE 11ES2	
D205	8-719-200-82	DIODE 11ES2	
D206	8-719-200-82	DIODE 11ES2	
D207	8-719-114-10	DIODE RD36ES-T2B2	
D208	8-719-987-63	DIODE 1N4148M	
D301	8-719-987-63	DIODE 1N4148M	
		< GROUND PLATE >	
* EB601	4-870-539-00	PLATE, GROUND	
		< IC >	
IC202	8-759-061-65	IC LA5602	
IC204	8-759-094-56	IC TA7808S (LBSONY)	
IC301	8-752-360-60	IC CXD2565M-1	
IC302	8-759-175-88	IC LA9215-ST	
IC308	8-749-921-12	IC GP1F32T (DIGITAL OUT OPTICAL)	
IC401	8-759-290-21	IC M37451M4-453FP	
IC403	8-759-821-32	IC CXA1291P	
		< JACK >	
J301	1-766-728-11	JACK (DIA. 3.5) (CONTROL A)	
J302	1-766-728-11	JACK (DIA. 3.5) (CONTROL A)	
J390	1-750-679-11	JACK, PIN 2P (LINE OUT)	
		< COIL >	
L201	1-412-473-21	INDUCTOR 0uH	
L202	1-412-473-21	INDUCTOR 0uH	
L203	1-412-473-21	INDUCTOR 0uH	
L204	1-412-473-21	INDUCTOR 0uH	
L205	1-412-473-31	INDUCTOR (SMALL TYPE) 0uH	
L301	1-412-297-11	INDUCTOR 3.3uH	
L302	1-412-473-21	INDUCTOR 0uH	
L303	1-412-473-21	INDUCTOR 0uH	
L304	1-410-970-21	INDUCTOR 10% 6.8uH (28.0MHz)	
L305	1-410-397-21	INDUCTOR 1.1uH	
L306	1-410-397-21	INDUCTOR 1.1uH	
L307	1-412-473-21	INDUCTOR 0uH	
		< TRANSISTOR >	
Q201	8-729-803-76	TRANSISTOR 2SA1371	
Q355	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q356	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q601	8-729-900-61	TRANSISTOR DTA114ES	
Q602	8-729-900-89	TRANSISTOR DTC144ES	
Q603	8-729-900-61	TRANSISTOR DTA114ES	
Q604	8-729-900-80	TRANSISTOR DTC114ES	
		< RESISTOR >	
R1	1-249-436-11	CARBON 39K 5% 1/4W	
R2	1-249-436-11	CARBON 39K 5% 1/4W	
R3	1-249-431-11	CARBON 15K 5% 1/4W	
R4	1-249-431-11	CARBON 15K 5% 1/4W	
R5	1-249-437-11	CARBON 47K 5% 1/4W	
R6	1-249-437-11	CARBON 47K 5% 1/4W	
R7	1-249-429-11	CARBON 10K 5% 1/4W	
R8	1-249-419-11	CARBON 1.5K 5% 1/4W	F
R9	1-249-419-11	CARBON 1.5K 5% 1/4W	F
R10	1-249-417-11	CARBON 1K 5% 1/4W	F
R11	1-249-441-11	CARBON 100K 5% 1/4W	
R201	1-249-429-11	CARBON 10K 5% 1/4W	
R202	1-249-423-11	CARBON 3.3K 5% 1/4W	F
R203	1-249-429-11	CARBON 10K 5% 1/4W	
R244	1-249-382-11	CARBON 1.2 5% 1/4W	F
R245	1-249-382-11	CARBON 1.2 5% 1/4W	F
R251	1-249-417-11	CARBON 1K 5% 1/4W	F
R301	1-249-417-11	CARBON 1K 5% 1/4W	F
R302	1-249-417-11	CARBON 1K 5% 1/4W	F
R303	1-249-417-11	CARBON 1K 5% 1/4W	F
R305	1-249-425-11	CARBON 4.7K 5% 1/4W	F
R306	1-247-807-31	CARBON 100 5% 1/4W	
R307	1-249-429-11	CARBON 10K 5% 1/4W	
R308	1-247-807-31	CARBON 100 5% 1/4W	F
R353	1-249-437-11	CARBON 47K 5% 1/4W	
R354	1-249-437-11	CARBON 47K 5% 1/4W	
R355	1-249-425-11	CARBON 4.7K 5% 1/4W	F
R356	1-249-429-11	CARBON 10K 5% 1/4W	
R357	1-249-393-11	CARBON 10 5% 1/4W	F
R401	1-249-425-11	CARBON 4.7K 5% 1/4W	F
R402	1-249-425-11	CARBON 4.7K 5% 1/4W	F
R403	1-249-425-11	CARBON 4.7K 5% 1/4W	F
R404	1-249-425-11	CARBON 4.7K 5% 1/4W	F
R405	1-249-425-11	CARBON 4.7K 5% 1/4W	F
R406	1-249-429-11	CARBON 10K 5% 1/4W	
R407	1-249-429-11	CARBON 10K 5% 1/4W	
R408	1-247-903-00	CARBON 1M 5% 1/4W	
R409	1-249-441-11	CARBON 100K 5% 1/4W	
R410	1-249-441-11	CARBON 100K 5% 1/4W	
R411	1-249-441-11	CARBON 100K 5% 1/4W	
R412	1-249-441-11	CARBON 100K 5% 1/4W	
R413	1-247-885-00	CARBON 180K 5% 1/4W	
R414	1-247-885-00	CARBON 180K 5% 1/4W	
R415	1-247-883-00	CARBON 150K 5% 1/4W	
R416	1-249-431-11	CARBON 15K 5% 1/4W	
R417	1-249-441-11	CARBON 100K 5% 1/4W	

MAIN | POWER SW | RF

Ref.No.	Part No.	Description				Remark
R418	1-249-441-11	CARBON	100K	5%	1/4W	
R419	1-249-441-11	CARBON	100K	5%	1/4W	
R420	1-249-441-11	CARBON	100K	5%	1/4W	
R421	1-249-393-11	CARBON	10	5%	1/4W	F
R422	1-249-393-11	CARBON	10	5%	1/4W	F
R423	1-249-393-11	CARBON	10	5%	1/4W	F
R426	1-247-860-11	CARBON	16K	5%	1/4W	
R451	1-249-417-11	CARBON	1K	5%	1/4W	F
R452	1-249-417-11	CARBON	1K	5%	1/4W	F
R453	1-249-417-11	CARBON	1K	5%	1/4W	F
R454	1-249-417-11	CARBON	1K	5%	1/4W	F
R455	1-249-417-11	CARBON	1K	5%	1/4W	F
R456	1-249-417-11	CARBON	1K	5%	1/4W	F
R457	1-249-417-11	CARBON	1K	5%	1/4W	F
R701	1-249-436-11	CARBON	39K	5%	1/4W	
R702	1-249-436-11	CARBON	39K	5%	1/4W	
R703	1-249-431-11	CARBON	15K	5%	1/4W	
R704	1-249-431-11	CARBON	15K	5%	1/4W	
R705	1-249-437-11	CARBON	47K	5%	1/4W	
R706	1-249-437-11	CARBON	47K	5%	1/4W	
R707	1-249-429-11	CARBON	10K	5%	1/4W	
R708	1-249-419-11	CARBON	1.5K	5%	1/4W	F
R709	1-249-419-11	CARBON	1.5K	5%	1/4W	F
R710	1-249-417-11	CARBON	1K	5%	1/4W	F
R711	1-249-441-11	CARBON	100K	5%	1/4W	
R951	1-249-429-11	CARBON	10K	5%	1/4W	
R952	1-249-429-11	CARBON	10K	5%	1/4W	
		< SWITCH >				
S901	1-762-151-11	SWITCH, SLIDE (COMMAND MODE)				
		< TRANSFORMER >				
⚠T901	1-426-956-11	TRANSFORMER, POWER (AEP, UK, AUS)				
⚠T901	1-426-957-11	TRANSFORMER, POWER (US, CND)				
		< VIBRATOR >				
X301	1-579-834-11	VIBRATOR, CRYSTAL				
X401	1-579-175-11	VIBRATOR, CERAMIC				
**********						
*	1-653-580-11	POWER SW BOARD				
		**********				
		< CONNECTOR >				
* CN805	1-565-481-11	CONNECTOR, BOARD TO BOARD 5P				
		< SWITCH >				
S805	1-554-118-00	SWITCH, PUSH (1 KEY) (POWER)				
S831	1-570-157-51	SWITCH, SLIDE (TIMER)				

Ref.No.	Part No.	Description				Remark
**********						
*	A-4649-728-A	RF BOARD, COMPLETE				
		**********				
		< CAPACITOR >				
C173	1-126-205-11	ELECT CHIP	47uF	20%	6.3V	
C174	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	
C175	1-126-206-11	ELECT CHIP	100uF	20%	6.3V	
C176	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V	
C180	1-163-038-00	CERAMIC CHIP	0.1uF		25V	
C181	1-163-038-00	CERAMIC CHIP	0.1uF		25V	
C183	1-124-778-00	ELECT CHIP	22uF	20%	6.3V	
C184	1-126-205-11	ELECT CHIP	47uF	20%	6.3V	
C185	1-126-205-11	ELECT CHIP	47uF	20%	6.3V	
C186	1-126-601-11	ELECT CHIP	2.2uF	20%	50V	
C187	1-163-038-00	CERAMIC CHIP	0.1uF		25V	
		< CONNECTOR >				
CN110	1-580-883-21	SOCKET, CONNECTOR (SMT) 12P				
CN112	1-580-883-21	SOCKET, CONNECTOR (SMT) 12P				
CN113	1-580-862-11	SOCKET, CONNECTOR (SMT) 8P				
CN114	1-580-866-11	SOCKET, CONNECTOR (SMT) 12P				
		< DIODE >				
D101	8-719-210-33	DIODE EC10DS2				
		< IC >				
IC110	8-752-033-14	IC CXA1081Q				
IC111	8-759-071-79	IC BA6297AFP				
		< TRANSISTOR >				
Q101	8-729-804-41	TRANSISTOR 2SB1122-S				
Q102	8-729-805-43	TRANSISTOR 2SC3396				
		< RESISTOR >				
R001	1-216-295-91	METAL GLAZE	0	5%	1/10W	
R002	1-216-295-91	METAL GLAZE	0	5%	1/10W	
R003	1-216-296-91	METAL GLAZE	0	5%	1/8W	
R004	1-216-296-91	METAL GLAZE	0	5%	1/8W	
R005	1-216-296-91	METAL GLAZE	0	5%	1/8W	
R006	1-216-296-91	METAL GLAZE	0	5%	1/8W	
R007	1-216-296-91	METAL GLAZE	0	5%	1/8W	
R008	1-216-296-91	METAL GLAZE	0	5%	1/8W	
R009	1-216-296-91	METAL GLAZE	0	5%	1/8W	
R010	1-216-296-91	METAL GLAZE	0	5%	1/8W	
R011	1-216-296-91	METAL GLAZE	0	5%	1/8W	
R012	1-216-296-91	METAL GLAZE	0	5%	1/8W	
R013	1-216-296-91	METAL GLAZE	0	5%	1/8W	
R014	1-216-296-91	METAL GLAZE	0	5%	1/8W	

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Ref. No.	Part No.	Description				Remark
R015	1-216-296-91	METAL GLAZE	0	5%	1/8W	
R016	1-216-296-91	METAL GLAZE	0	5%	1/8W	
R017	1-216-296-91	METAL GLAZE	0	5%	1/8W	
R018	1-216-296-91	METAL GLAZE	0	5%	1/8W	
R019	1-216-296-91	METAL GLAZE	0	5%	1/8W	
R020	1-216-296-91	METAL GLAZE	0	5%	1/8W	
R021	1-216-296-91	METAL GLAZE	0	5%	1/8W	
R022	1-216-296-91	METAL GLAZE	0	5%	1/8W	
R023	1-216-296-91	METAL GLAZE	0	5%	1/8W	
R024	1-216-296-91	METAL GLAZE	0	5%	1/8W	
R025	1-216-296-91	METAL GLAZE	0	5%	1/8W	
R026	1-216-296-91	METAL GLAZE	0	5%	1/8W	
R027	1-216-296-91	METAL GLAZE	0	5%	1/8W	
R028	1-216-295-91	METAL GLAZE	0	5%	1/10W	
R029	1-216-296-91	METAL GLAZE	0	5%	1/8W	
R030	1-216-296-91	METAL GLAZE	0	5%	1/8W	
R031	1-216-296-91	METAL GLAZE	0	5%	1/8W	
R032	1-216-296-91	METAL GLAZE	0	5%	1/8W	
R033	1-216-296-91	METAL GLAZE	0	5%	1/8W	
R034	1-216-296-91	METAL GLAZE	0	5%	1/8W	
R035	1-216-296-91	METAL GLAZE	0	5%	1/8W	
R036	1-216-296-91	METAL GLAZE	0	5%	1/8W	
R171	1-216-001-00	METAL CHIP	10	5%	1/10W	
R172	1-216-003-11	METAL GLAZE	12	5%	1/10W	
R173	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R174	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R175	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R176	1-216-024-00	METAL GLAZE	91	5%	1/10W	
R177	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R178	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R181	1-216-076-00	METAL CHIP	13K	5%	1/10W	
R182	1-216-076-00	METAL CHIP	13K	5%	1/10W	
R183	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R184	1-216-085-00	METAL CHIP	33K	5%	1/10W	
R185	1-216-085-00	METAL CHIP	33K	5%	1/10W	
R187	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R188	1-216-075-00	METAL CHIP	12K	5%	1/10W	
R190	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R191	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R192	1-216-075-00	METAL CHIP	12K	5%	1/10W	
R193	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R194	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R195	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R196	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R197	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R198	1-216-092-00	METAL GLAZE	62K	5%	1/10W	
R199	1-216-092-00	METAL GLAZE	62K	5%	1/10W	

Ref. No.	Part No.	Description				Remark
		< VARIABLE RESISTOR >				
RV101	1-223-276-11	RES, ADJ, CERMET 22K				
RV102	1-223-276-11	RES, ADJ, CERMET 22K				
**********						
*	1-649-107-11	SENSOR BOARD				
		**********				
		< IC >				
IC810	8-749-924-18	IC RPI-1391				
IC811	8-749-924-18	IC RPI-1391				
IC812	8-749-924-18	IC RPI-1391				
		< RESISTOR >				
R892	1-249-416-11	CARBON	820	5%	1/4W	F
R893	1-249-416-11	CARBON	820	5%	1/4W	F
R894	1-249-416-11	CARBON	820	5%	1/4W	F
**********						
*	1-649-110-11	TABLE MOTOR BOARD				
		**********				
		< MOTOR >				
M803	A-4604-834-A	MOTOR ASSY, TABLE				
**********						
		MISCELLANEOUS				
		**********				
17	1-751-482-11	WIRE (FLAT TYPE) (10 CORE)				
18	1-751-478-11	WIRE (FLAT TYPE) (23 CORE)				
19	1-765-600-11	WIRE (FLAT TYPE) (19 CORE)				
⚠25	1-558-568-21	CORD, POWER (AEP)				
⚠25	1-590-836-11	CORD, POWER (US, CND)				
⚠25	1-696-571-11	CORD, POWER (UK)				
⚠25	1-696-845-11	CORD, POWER (AUS)				
108	1-751-481-11	WIRE (FLAT TYPE) (8 CORE)				
114	1-751-479-11	WIRE (FLAT TYPE) (12 CORE)				
201	8-835-456-01	MOTOR, DC SSC-02E01S				
⚠209	8-848-178-11	OPTICAL PICK-UP BLOCK KSS-310A				
FL801	1-517-332-11	INDICATOR TUBE, FLUORESCENT				
M802	A-4604-834-A	MOTOR ASSY, LOADING				
M803	A-4604-834-A	MOTOR ASSY, TABLE				
⚠T901	1-426-956-11	TRANSFORMER, POWER (AEP, UK, AUS)				
⚠T901	1-426-957-11	TRANSFORMER, POWER (US, CND)				
**********						

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Ref. No.	Part No.	Description	Remark
		ACCESSORIES & PACKING MATERIALS	
		**********	
	1-467-777-11	REMOTE COMMANDER (RM-DX151)	
	1-558-271-11	CORD, CONNECTION (AUDIO) (108cm)	
	3-707-584-21	COVER, BATTERY (for RM-DX151)	
	3-759-174-11	MANUAL, INSTRUCTION (ENGLISH, FRENCH, SPANISH) (CND, AEP, UK)	
	3-759-174-21	MANUAL, INSTRUCTION (ENGLISH) (US, AUS)	
	3-759-174-41	MANUAL, INSTRUCTION (GERMAN, DUTCH, ITALIAN, PORTUGUESE) (AEP)	
	4-956-370-02	BAND, PLUG FIXED (AUS)	
*	4-961-161-01	CUSHION	
*	4-969-015-01	INDIVIDUAL CARTON	
	4-970-015-01	HOLDER (BOOKLET L)	
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		**********	
		HARDWARE LIST	
		**********	
#1	7-682-649-09	SCREW +PWH 3X10	
#2	7-685-249-19	SCREW +KTP 3X14 TYPE2 NON-SLIT	
#3	7-685-646-79	SCREW +P 3X8 TYPE2 NON-SLIT	
#4	7-685-671-19	SCREW +BVTP 5X10 TYPE2 N-S	
#5	7-682-545-09	SCREW +B 3X4	
#6	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S	
#7	7-621-775-00	SCREW +B 2.6X3	
#8	7-621-772-40	SCREW +B 2X8	
#9	7-685-103-19	SCREW +P 2X5 TYPE2 NON-SLIT	
#10	7-621-772-20	SCREW +B 2X5	
#11	7-682-947-01	SCREW +PSW 3X6	
#12	7-682-547-09	SCREW +BVTT 3X6 (S)	
#13	7-624-106-04	STOP RING 3.0, TYPE -E	
#14	7-682-544-09	SCREW +B 3X3	
#15	7-621-775-20	SCREW +B 2.6X5	
#16	7-621-770-87	SCREW +B 2.6X5	
#17	7-624-104-04	STOP RING 2.0, TYPE -E	
#18	7-624-108-04	STOP RING 4.0, TYPE -E	
#19	7-685-649-79	SCREW +BVTP 3X14 TYPE2 N-S (AUS)	
#20	7-624-105-04	STOP RING 2.3, TYPE -E	
#21	7-628-253-15	SCREW +PS 2X5	
#22	7-682-648-09	SCREW +PWH 3X8	
#23	7-627-553-37	PRECISION SCREW +P 2X3 TYPE 3	
#24	7-627-852-17	+P 1.7X4	
#25	7-685-102-19	SCREW +P 2X4 TYPE 2 NON-SLIT	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

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